



JOURNAL
of
EARLY SOUTHERN
DECORATIVE ARTS

May, 1981
Volume VII, Number 1
The Museum of Early Southern
Decorative Arts

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May, 1981
Volume VII, Number 1
Published twice yearly in
May and November by
The Museum of Early Southern Decorative Arts

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Printed by Hall Printing Company
High Point, North Carolina

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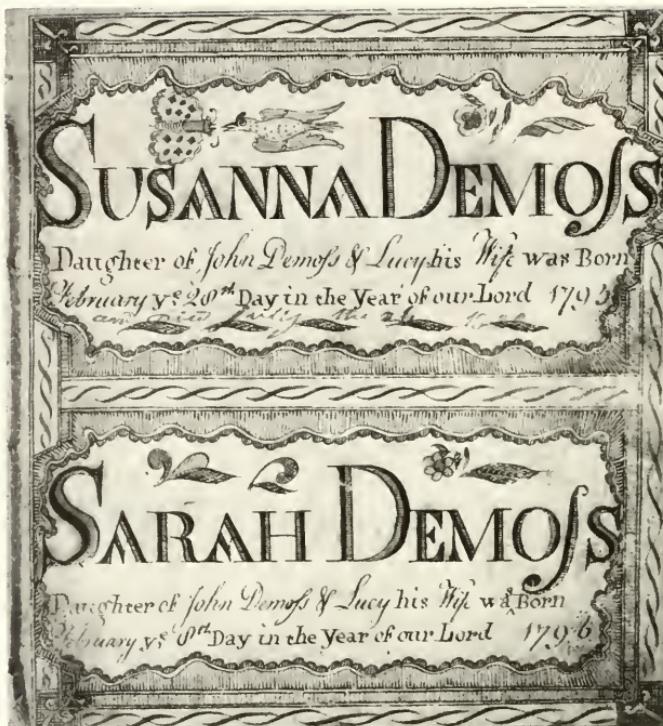


Figure 1. The first page of the Demoss family book, c. 1803, showing the style of writing, a bird confronting a butterfly, and various border motifs. Photograph courtesy of the National Archives, Washington, DC.

Decorated Family Record Books From the Valley of Virginia

CAROLYN J. WEEKLEY

In 1974 the Abby Aldrich Rockefeller Folk Art Center organized a small, but important exhibition titled "Virginia Fraktur." Klaus Wust, a noted scholar who has written various publications on the Virginia Germans and their folk art,¹ served as guest curator for the exhibit and among his selections were a number of previously unknown decorated records. Within this group of new pictorial material were pages from record books for the Bannan, Fries and Hobday families, all of which were drawn by an unidentified artist in the vicinity of Winchester, Virginia, during the first quarter of the nineteenth century. A fourth book in the exhibit, done for the Howsmon family, previously was attributed to John Barnard.² A single page at the end of this book was executed by the same unidentified hand. Since the 1974 show over a half dozen more of these impressive little booklets, either complete or in part, have been located in both private and public collections, thereby forming one of the largest groups of their type documented to the Valley of Virginia (see chart on pp. 11-18).

The identity of the artist still eludes our research efforts, although the nature of his drawings and the history of most of the original owners provide important clues as to his working dates, his possible religious affiliation and an indication of his geographical area of activity. This article is therefore more introductory in nature than conclusive, offering through stylistic analysis and historical context a basis for the discovery of additional examples by the artist and hopefully his identity.

An issue to weigh carefully and cautiously in examining this unknown decorator's work is the cultural context in which they originated. Traditionally, the tendency has been to group them with the colorful and equally impressive variety of birth and baptismal certificates (*Geburts und Taufscheine*, normally referred to as simply *Taufscheine*) created by and for settlers of German extraction living in the "back parts" of the southeastern states (western Maryland, the Valley of Virginia, and the piedmont sections of North and South Carolina). The general stylistic similarities observed between the record book artist's work and that by Germans partially justifies its study in reference to *fraktur*, but does not explain other obvious differences in design iconography, format and textual orientation, all of which contrast significantly with Germanic prototypes. The evidence gathered thus far indicates that the artist may have been "Scots-Irish," Irish, or English and that a number of his clientele were affiliated principally with Presbyterian churches in the areas of Frederick County, Virginia, and Berkeley County, Virginia (now West Virginia).³ It is commonly known that immigrants in these particular ethnic categories represented a substantial portion of the Valley's population and political leadership during the eighteenth and early nineteenth centuries.⁴ It is unfortunate, however, that so little study has been devoted to their artistic traditions and contributions.

Supporting the thesis that the Virginia record book artist was either "Scots-Irish, Irish, or English is the fact that the written text in all of his known work is in the English idiom, precise in spelling and phrasing. The English or Roman letter style and character of the script does not relate to the more elaborate broken gothic lettering used by many *fraktur* artists (Fig. 1), but its consistently polished quality suggests an accomplished calligrapher who may have taught penmanship at one or more of the numerous schools organized by Presbyterians in the Winchester-Berkeley Springs area.⁵ The Reverend Dr. William Hill, whose ministerial service at Winchester extended from 1799 to 1834, also conducted a school and was considered a likely artist candidate until an examination of his handwritten autobiography showed him to have been a poor, if not sloppy, penman.⁶ The names of a few other ministers who were part-time schoolmasters as well also have been researched with equally disappointing results.

The anonymity of the artist makes it difficult to pinpoint his dates of activity, but a tentative span of 1800 to 1821 can be suggested at this time. This is derived from the October 20, 1821

death date cited for Margaret Hobday and an inscription reading "Mr. Benjamin Bannan/Book Feb. y^e 26th/1800," both of which are in the artist's handwriting. One other book in the group, that for the John Demoss family of Winchester, is dated 1803 in the artist's script.⁷ The dates of the remaining record books can only be calculated upon the basis of the latest year date appearing in the artist's hand. There is no apparent chronological development evident in the style or quality of execution of these booklets. With few exceptions, the artist's design vocabulary and calligraphic facility were as well developed in 1800 as they were in 1821.



Figure 2. A decorative page with three compositions from the John Miller family book, c. 1801. This faces a page giving the birth dates for John, Joseph, and Ruth Miller. Private collection. Photograph courtesy of the Abby Aldrich Rockefeller Folk Art Center, Williamsburg, Virginia, unless noted otherwise.

The rich variety of embellishments used by this unknown decorator defies strict classification because the discovery of other works by him will undoubtedly reveal additional fanciful interpretations of his basic motifs. Unlike many record decorators of roughly the same period, whose design elements were often repeated time and again with little difference in detail, this artist

consciously made an effort to give each book a distinctive, individualistic look by varying details or combining motifs in a new way (Figs. 2 and 3). His penchant for diversity is therefore one of the most important identifying features of his work.

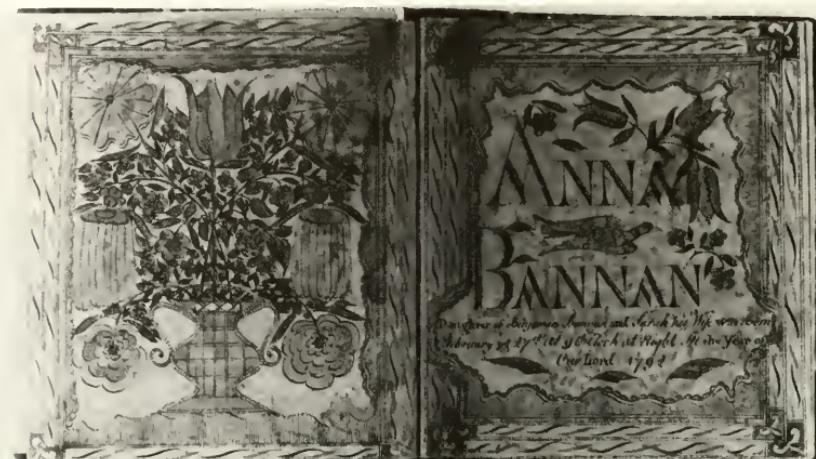


Figure 3. Two facing pages from the Bannan family book, 1800, showing at left an unusual basket of flowers, a motif used infrequently by the artist. Courtesy Kennedy Galleries, Inc., New York.

Close study of the illustrations accompanying this article will give some notion of the complexity of this characteristic, but the reader should bear in mind that only random portions of just six of the fourteen known partial or complete booklets are shown. Within a single motif category, such as "birds," for example, over thirty variations have been recorded. Traced outlines of such small elements were compiled by category for comparative study in the course of research for this article. A random selection of these is included in Figures 4, 5, and 6, with notations on the particular record books in which they appear. The general categories for small motifs include birds, flowers and leaves of various sorts, butterflies, and calligraphic flourishes in capital letters.

A number of large devices favored by the decorator appear regularly with little deviation in detail. One which is consistently found is a rippling, occasionally scalloped-edged curtain, just inside and next to several types of outer geometric, rectangular borders (see Figs. 1 and 2, for example). This curtain invariably frames textual passages and complex central compositions of flowers, birds, trees and the like. An impressive three-story building topped by multiple cupolas with Masonic symbols adorns-



Figure 4. The H, M, and S are from the Hobday family book; the D and C from the Howard family record. Line two birds are also found in the Howard book. The flying bird below them is from the Fries pages, the two smaller birds are from the Miller book and the facing birds on flowers come from the Hobday record book. Artwork by the author.

ing the doorway as well as the central tower and the sky above fills the full front pages of three books and three-quarters of the front page of the Miller family book (see Fig. 11). The building presumably represents the Temple of Solomon, and coupled with other traditional symbols—ladder, trowel, sun, moon, seven stars, open Bible, square and compasses, spade, anchor and what may be a pot

of incense—probably indicates that the original owner was a member of the Masonic Order.⁸

Bushy, close-leaved trees, occasionally with two smaller leafy branches issuing from the lower or midsection of the trunk, are seen in a majority of the record books with no obvious symbolic inference (see Fig. 8). The common six-sided coffin, either in solid black or in a hatched pattern, is one of the few clearly symbolic images used by the artist. Without exception, the coffin is accom-



Figure 5. Upper left and center show two other varieties of perching and flying birds found in the Hobday book. Lower left is a sketch of the peacock appearing in the Laing book and below it is a small, dotted bird from the same book. The butterflies, upper and lower, are from the Laing and Miller books while the smaller birds left of them also come from the Miller pages. Artwork by the author.



Figure 6. From left to right top to bottom in four rows are the following: Row one—two geometric designs of leaves and flowers from the Miller and Hobday books; rows two and three show various other flowers from the Hobday book; row four—two small sprigs with cherry and flower are from the Miller book as is the large tulip at the end of this row, the sunflower with interior star motif is from the Laing family book; row five—a five-lobed flower with cherries from Bannan book, a sunflower with "comma-like" designs from the Hobday book; and a simpler sunflower from the Hobday book. Artwork by the author.

panied by an appropriate verse and is framed by a stylized rippling curtain within a rectangular box of geometric borders. Occasionally rows of drooping flowers are placed above and/or below the coffin rectangle (see Fig. 7).

Large, elaborate peacocks illustrate pages in the Laing and Tomlin family books (see Fig. 5) and are the most naturalistically rendered of all the elements used by this artist. Because they are so strikingly sophisticated, one wonders if these were not inspired by or copied from a printed source.



Figure 7. A page from the Howard family book commemorating the death of a child and showing the drooping flowers, coffin, verse and other typical motifs used by the artist. Photograph courtesy of the Collections of Greenfield Village and the Henry Ford Museum, Dearborn, Michigan.

With respect to technique, it is important to note that all of the decorated pages known for this artist were executed primarily, if not solely, with pen and ink. No brushwork is evident in any of the pieces. Shade, form, and color all were achieved basically with pen-work, using colored inks for outline, the hatched and cross-hatched lines combined infrequently with solid inked areas. The extensive use of basically calligraphic techniques of this type in decorating family records is not a particularly commonplace phenomenon and this artist's source of inspiration is unknown.⁹

One of the most interesting aspects of the records examined are the color schemes used. These vary slightly, but generally fall into

two groups—a black, reddish brown, and blue scheme and a black, blue, red, green, and yellow scheme. Since the type of inks or liquids used have not been determined, it is difficult to ascertain how much the true colors have migrated or faded. However, two booklets which have not experienced extensive light exposure over the last hundred years match each of the two types described with minimal differences in color hue.¹⁰ Whether or not the brighter of these two schemes was more expensive, a preference of the owner, or dependent on the availability of materials is unknown.

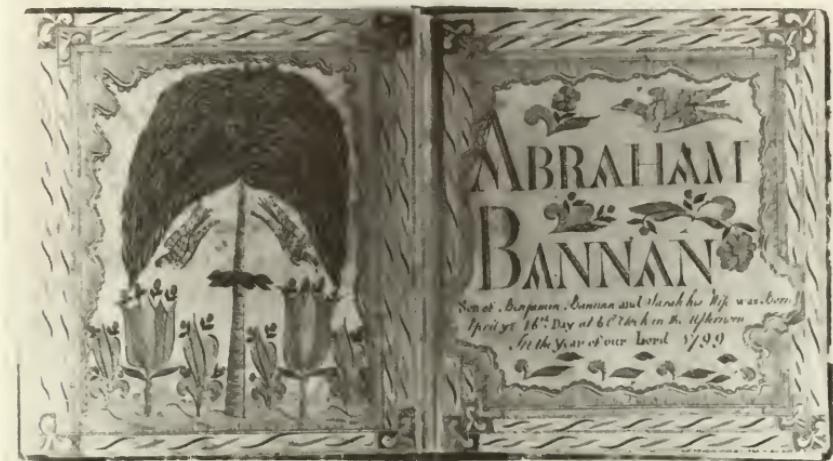


Figure 8. Two facing pages from the Bannan family record book, 1800, showing on left the type of tree frequently used by the artist. Courtesy Kennedy Galleries, Inc., New York.

When one begins to assemble all of the various elements and characteristics outlined and described heretofore, an equally characteristic pattern for individual pages and page sequence becomes immediately recognizable. As before, however, the diversity achieved in arranging the elements seems to be endless. A few generally repetitive features include: either single or double geometric borders, framing all the pages; rippling curtains, as previously described, just inside and touching the borders; two shapes for pages, the smaller variety being nearly square and the larger, a vertical rectangle (Figs. 9 and 3, for example); individual headings for family members are usually one or two to a page for smaller formats and three for the larger one. The page sequence in these books seems to be basically chronological by birth date for the children. These are preceded by a single page giving the parents' names, birth, and marriage dates (Fig. 9). All of the text



Figure 9. A page from the Howard family book, c. 1820. Photographs courtesy of the Collections of Greenfield Village and the Henry Ford Museum, Dearborn, Michigan.

pages alternate with purely decorative ones (Figs. 2, 3 and 10, for example). There is one exception to this arrangement which occurs in the book for the Rhodes family where three blank pages for "Death" and "Marriage" are provided (Figs. 11 and 12).

It should again be noted that a number of the booklets attributed to this artist are thought to be incomplete and, in one instance, only two decorative nontextual pages survive.¹¹ This ultimately affects the arrangement observations noted here, which are speculative at best. Furthermore, some of the books have been taken apart and their original sequence cannot always be determined.

Though equally unsolved, a final consideration in studying this group is the possible influence they or their maker may have had on other record decorators working in the Winchester area, notably the elusive "Stoney Creek Artist" whose fraktur ranks among the most colorful for the Valley.¹² His career seems to have paralleled that of the family record book artist and within his work are found a few similar designs, chiefly a butterfly, a multilobed flower, and

a fleur-de-lis. The illustrator for the Howsmon book, mentioned earlier, also seems to have based his frontispiece building and other small motifs on those by the artist discussed here.¹³ It is obviously too early in our research to speculate on what these few stylistic connections may or may not mean, but they are certainly indicators of the cultural exchange and rich mixture of artistic expressions which proliferated in the Valley during these years. Hopefully, with the continued generous help of scholars and private citizens who own such materials, we will someday be able to offer a more definitive statement.



Figure 10. Two facing pages from the Fries book, c. 1817. Private collection.

CHART OF RECORD BOOKS KNOWN

The many details associated with the genealogical and documentary aspects of the known record books by this artist are best presented in the following chart format. All of the year dates and names cited are those which appear in the artist's handwriting, excluding in many cases the names and birth/death dates of children which were born to individual families and recorded by someone else in the record books. The month and day designations for children's births were always included by this artist but have been omitted here in the interest of space and pertinence. The specifics of all marriage and birth dates of parents, where known and recorded by the artist, are given. Listed are family members recorded by the artist. The arrangement of the listings is by chronological date of approximate (circa, c.) or documented date (i.e., 1800).

Date of Execution: 1800

I. Benjamin Bannan (b. March 15, 1770, m. on April 12, 1791 to Sarah Bunn, b. April 5, 1762)

Children were:

Anna Bannan (b. 1792)
Mary Bannan (b. 1795)
John Bannan (b. 1796)
Abraham Bannan (b. 1799)

This is the earliest dated book known for the artist, inscribed in his hand on the front page for 1800. On the other side of this frontis page and preceding the text page for the parents is written in another hand the death dates for the parents and Annah (Anna). Additional genealogical notes for other members of the family appear at the end of the booklet. No other documented references to the Bannan family have been found.

Kennedy Galleries, Inc., New York, New York, owner.

Date of Execution: c. 1800

II. John Tomlin (b. March 15, 1765, m. August 7, 1788 to Jane Chamblin, b. June 19, 1763)

Children were:

George Tomlin (b. 1784)
Elizabeth Tomlin (b. 1785)
William Tomlin (b. 1787)
Reuben Tomlin (b. 1789)
John Tomlin (b. 178(illegible))

The John Tomlin record book, like that of John Demoss, was originally submitted to the United States Government as part of a dossier of claim supporting a pension application for service rendered during the Revolutionary War. This particular booklet was taken apart and put back together at an early date and there seem to be pages missing. The declaration submitted by Tomlin's widow, Jane, states that she was living in Clarke County, Virginia, in 1840. (All information cited is from the Revolutionary War Pension Application File for John Tomlin, The National Archives, Washington, DC.)

The National Archives, Washington, DC, owner

Date of Execution: c. 1801

III. James Laing (b. April 6, 1751, in Pearthe (sic), Scotland, m. July 20, 17(illegible) to Hellen Dawson, b. December 30, 1757)

Children were:

William Laing (b. 1784 in Clackmannan County, Scotland)

Jeany Laing (b. 1786 in Maryland, North America, d. 1791)

Robert Laing (b. 1779 in Clackmanan County, Scotland)

Betty Laing (b. 1781, d. 1783)

James Laing (b. 1789 in Virginia, North America)

Rachel and Rebeckah Laing (presumably twins), b. 1790, Rebeckah d. 1792, in Virginia, North America)

Catherine Laing (b. 1792 in Virginia, North America)

Frances Laing (b. 1796 in Virginia, North America)

Innocent Laing (stillborn 1794 in Virginia, North America)

John Laing (b. 1797 in Virginia, North America)

Betty Laing (b. 1799 in Virginia, North America)

This book descended to the present owner from Laing ancestors who, like the Demoss family, moved to the Midwest from the Winchester area. Although the surname Laing is not prevalent in the Valley, the James Lang (Laing?) listed for Frederick County in the 1810 census was probably the father. An 1820 Census listing there for the same name could have been either the father or the son.

(Madeline W. Crickard, comp., *Index to the 1810 Virginia Census* (Parsons, W. Va: McClain Printing, 1971), p. 107; Jeanne Robey Felldin, comp., *Index to the 1820 Census of Virginia* (Baltimore: Genealogical Publishing Co., Inc., 1976), p. 3.

Private Collection

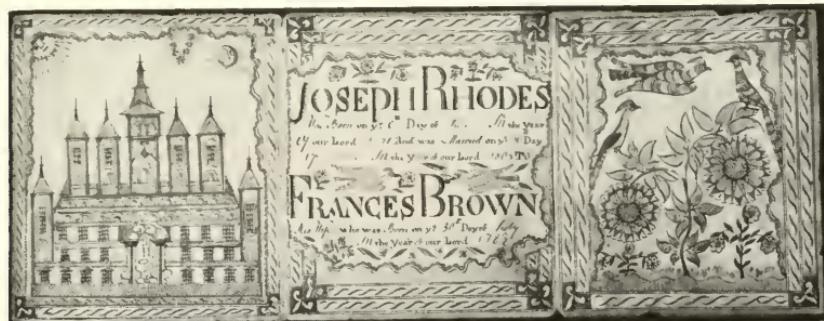


Figure 11. Front sides of the three existing pages surviving for the Joseph Rhodes book. Photograph courtesy of the Collections of Greenfield Village and the Henry Ford Museum, Dearborn, Michigan.

Date of Execution: c. 1801

IV. John Miller (b. March 17, 17(illegible), m. March 25, 1782 to Ruth Bailey, b. December 8, 1762)

Children were:

Hiram Miller (stillborn 1783)
Alexanda Miller (b. 1784)
Esther Miller (b. 1786)
Elizabeth Miller (b. 1787)
John Miller (b. 1789)
Joseph Miller (b. 1791)
Ruth Miller (b. 1793)
James Miller (b. 1795)
Isaac Miller (b. 1796)
Stephen Miller (b. 1799)

John Miller and his family are particularly well-documented due to the research efforts of the current owner of the booklet who enthusiastically shared his findings with the author. The father, John, served in the Revolutionary War with the 53rd Virginia Regiment, called "The Berkeley Troops." Further evidence of Miller's residence in Berkeley County is found in various deedbooks there. Deedbook 6, p. 13, notes that on September 16, 1782, Miller's transaction to purchase 200 acres of land from William and Elizabeth Bailey (Miller's in-laws) was finalized. John Miller sold this land in 1801 to John Prill (Deedbook 17, p. 86), probably in anticipation of his move to Nelson County, Kentucky, in 1803. Family tradition indicates further that the Millers were Scotch-Irish who moved from Pennsylvania to Berkeley County. According to the owner, John's son Joseph bought a farm in Spencer County, Kentucky, and built a house there in 1836. One acre of that property was set aside for the use of the Presbyterian Church. Other members of John Miller's large family reportedly moved to Kentucky and most of them are thought to have been Presbyterians.

Private Collection

Date of Execution: 1803

V. John Demoss (b. 175(illegible), m. January 5, 1787 to Lucy Chapel, b. September 27, 1765)

Children were:

Peter Demoss (b. 1788)
Dorothy Demoss (b. 1790)
Susanna Demoss (b. 1793)
Sarah Demoss (b. 1796)

This booklet, also part of a Revolutionary War pension application, was submitted in 1844 by Demoss's daughter Dorothy. Her father made his original declaration in 1819 when he had moved his family to Dearborn County, Indiana. In this document he states that he served in the 12th Virginia Regiment commanded by Colonel James Wood in various tours of duty, including the battle of Camden, South Carolina. He was transferred to the 4th Virginia Regiment and, after the "Capture" of Lord Cornwallis, his Regiment was marched from "the high hills of South Carolina" to Winchester, Virginia. Thereafter he was em-

ployed by the United States to transport the baggage of the French Army from Williamsburg to Boston, Massachusetts. (All information cited is from the Revolutionary War Pension File for John Demoss, the National Archives, Washington, DC.)

The National Archives, Washington, DC, owner.



Figure 12. Back of one of the Rhodes family pages illustrating the unusual single sheet for "Marriage" listings. Photograph courtesy of the Collections of Greenfield Village and the Henry Ford Museum, Dearborn, Michigan.

Date of Execution: c. 1803-1805

VI. (Unknown Member of the Howsmon family)

A single decorated page with birds and flowers by the artist appears at the end of this booklet with no apparent matching text page. Other illustrations preceding this, by another hand, show that the book was done for John Howsmon of Frederick County, Virginia. An inscription on the inside front cover of the book reads, in part, "J. Howsmon/his Age Book/ April 22, 1805." The Howsmon family lived in Frederick County near Winchester until 1804, it is said, when they moved to Ross County, Ohio. This inscription clearly complicates the issue of dating and provenance, however, the author believes that the single page executed by the artist discussed in this article was done before the family's move and therefore before 1804. Klaus Wust's research on the family revealed that they were Presbyterians and that John Howsmon was born in Frederick County and lived there with his wife, Martha Frost, until the 1804 move. John Howsmon died in Ross County, Ohio, in 1818. (Information cited is from the AARFAC research file and a letter to the author from Mr. Wust dated February 10, 1981.)

Private Collection.

Date of Execution: c. 1803

VII. Joseph Rhodes (b. June 6, 1778, m. June 30, 1803 to Frances Brown, b. July 30, 178(3?))

No information has been found on the Joseph Rhodes family or where they lived, thus the attribution to the artist and a Valley provenance is based purely on its stylistic similarity with other documented works. It was acquired by the Museum from a Midwestern source.

The Henry Ford Museum, Dearborn, Michigan, owner.

Date of Execution: c. 1812(?)

VIII. Henry Ferneau (b. 1812)
(See Mahala Dawson below)

Date of Execution: C. 1817

IX. Anna Fries (b. 1810)
Michael Fries (b. 1813)
Rachel Fries (b. 1817)

They were children of Michael and Rachel Fries who lived near Winchester, between Cedar Grove and Green Spring in an area known as Pleasant Valley. Anna and Rachel are buried in the graveyard of the Old Stone Church there and family tradition indicates that their parents are also buried there. Michael, their father, died in October 1828 according to Frederick County Court Records. Page 92 of the Frederick County Death Records notes that Anna Fries died there on November 12, 1855, of typhoid fever. Michael Fries, her brother, is mentioned as having provided the information for the County Record. (All information was gleaned from research notes gathered by the owner of four pages for Anna and Rachel Fries.)

Two text and two decorated compositional pages for Anna and Rachel Fries are in a Private Collection. The two pages for Michael Fries are in the M. & M. Karolik Collection at the Museum of Fine Arts, Boston, Massachusetts.

Date of Execution: c. 1817

X. Mahala Haney (b. 1817)

Mahala's decorated birth record page and its companion page with a central composition of a bird perched on a leafy and flowering tree are the only two known for this family, although others undoubtedly existed. Mahala is noted on her birth page as the daughter of Robert and Catharine Haney. The author has not been able to reach the owners of these pages to learn more on their provenance. Klaus Wust kindly shared his file photographs with the author to substantiate their attribution to the artist.

Private Collection.

Date of Execution: c. 1818(?)

XI. Mahala Dawson (b. 1818)
Henry Ferneau (b. 1812)

The two sets of pages for these two children are temporarily listed together because the author has been unable to determine whether they were, for some unknown reason, originally part of the same booklet. They were purchased from a single source as a group by the current owner and the provenance at that time was given as Virginia. The sets share certain similarities in color and border motifs but do vary slightly in size. No information on the Ferneau family has been found, except that given on Henry Ferneau's text page—that he was the son of Daniel and Catharine Ferneau. Mahala was the daughter of Henry and Mary Dawson. A Henry Dawson, perhaps her father, is listed in the 1810 census for Berkeley County. A Henry Dawson from the Valley was one of the signers of a 1776 Petition from local Presbyterians to the Virginia Government, but his association with Mahala is unverified. (Crickard, *Index to the 1810 Census*, p. 33; *The Virginia Magazine of History and Biography*, Vol. XVII, December 31, 1910, p. 40.)

Private Collection.

Date of Execution: c. 1820

XII. (a) John D. Howard (b. January 15, 1738, d. July 22, 1804, m. (dates not given) to Mary Crail, b. March 19, 1751)
(b) Jonathan Howard (b. January 19, 1781, m. to Mary Crail, b. January 26, 1785)

Nothing specific is known about the Howard family booklet or individual persons cited there, except that it was purchased from a Midwestern source. Its attribution to the Virginia artist is based principally on its stylistic affinity with documented examples. The Howard name appears most frequently in Morgan County, West Virginia (formerly Virginia and organized in 1820 out of Berkeley and Hampshire Counties).

The two sets of parents given at the front of the book are not found in any other booklets by the artist. It appears that John D. Howard and Mary Crail were the parents of Jonathan Howard who evidently married another Mary Crail (perhaps a cousin?). (Felldin, Index to the 1820 Census, p. 216.)

The Henry Ford Museum, Dearborn, Michigan, owner.

Date of Execution: c. 1821

XIII. William Hobday (b. January 6, 178(illegible), m. March 20, 1803 to Christena Widmeyer, b. May 5, 1775)

Children were:

Sally Hobday (b. 1806)
Sarah Hobday (b. ?, d. 1820)
Hannah Hobday (dates unknown)
Abraham Hobday (b. 1813, d. 1815)
Margaret Hobday (b. 1815, d. 1821)
Elizabeth Hobday (b. 1819)

This family was identified with Frederick County, Virginia in 1974 by Klaus Wust. The exhibition copy describing the booklet noted that death pages by the artist for three children were added at a later date. The addition theory is entirely possible, however it is uncharacteristic of the artist's known work. It is also observed that birth pages for Sarah and Hannah (known only because a shadow image of her name appears on one page) and possibly another child are now missing. When these were removed it may have caused the remounting of other pages in the same signature.

Private Collection.

Date of Execution: Unknown

XIV. Unknown, only two decorative, noncontextual pages exist.

No history for these two pieces is known other than the fact that they were purchased from the same source.

The M. & M. Karolik Collection at The Museum of Fine Arts, Boston, Massachusetts, owner.

Carolyn Weekley is curator of the Abby Aldrich Rockefeller Folk Art Center, Williamsburg, Virginia.

FOOTNOTES

1. Among Mr. Wust's publications are *The Virginia Germans* (Charlottesville: The University Press of Virginia, 1969); *Folk Art in Stone: Southwest Virginia* (Edinburg, Virginia: Shenandoah History, 1970); and *Virginia Fraktur: Penmanship as Folk Art* (Edinburg, Virginia: Shenandoah History, 1972).
2. Marjorie Baylor, "John Howsmon, his Age Book," *The Magazine Antiques*, Vol. LXXXI, No. 2, February 1962, pp. 201-204. At the time of this article all of the Howsmon book was attributed to a John Barnard on the basis of an inscription appearing on the front page which reads "John Barnard/his hand and pen/ he will be good/and Come again." Mr. Wust corrected the attribution to "unidentified" in the 1974 Williamsburg exhibit, noting that there was no further documentation for a Barnard attribution and that the last decorated page in the book was obviously executed by a second, different hand. It should be noted here, however, that the text page for Peggy Howsmon preceding the one by the artist discussed in this article has a heart surrounded by the words "The Darling of my Heart"; these words are in the handwriting of the Virginia record book artist.
3. Not all of the families cited in the books have been documented to specific areas within Frederick and Berkeley Counties. These counties share a common boundary (now the Virginia state line) and Berkeley Springs is about 42 miles due north of Winchester. There is a possibility that the artist executed work for families in Morgan County (now West Virginia, west and adjacent to Berkeley) since some family surnames frequently appear in early census records there. See chart on pp. 11-18 for specific details.
4. A particularly useful and well documented general history of Presbyterianism in Virginia is found in Howard McKnight Wilson, *The Lexington Presbytery Heritage* (Verona, Virginia: McClure Printing Company, Inc., 1971), pp. 3-73.
5. *Ibid.*, pp. 81-83.
6. The original Hill manuscript, along with other miscellaneous letters, is in the collections of The Library, Union Theological Seminary, Richmond, Virginia.
7. The Demoss family book is in the collections of the National Archives, Washington, DC.
8. Existing records for the local Masonic Lodge(s) have not been thoroughly researched at this time, although it is likely that the heads of households for the four families—John Miller, Joseph Rhodes, James Laing and William Hobday—belonged to the Winchester Lodge No. 12 (earlier as No. 9). The number and specific Masonic symbols vary among these four books and a discussion of their significance is beyond the scope of this article. The author

recommends for further reading Clement M. Silvestro and Barbara Franco, *Masonic Symbols in American Decorative Arts* (Lexington, Massachusetts: Scottish Rite Masonic Museum and Library, Inc., 1976), pp. 9-52.

9. The author would be grateful for reference suggestions, particularly any existing c. 1790-1800 calligraphic instruction books or copybooks which illustrate motifs similar to those used by this artist.
10. These are the booklets for the John Demoss and the John Tomlin families in the collections of the National Archives, Washington, DC. The Tomlin book is in very fragile condition, having been torn in half and taken apart and sewn back together at an early date. Its colors of black, reddish brown and blue, however, show no appreciable difference in intensity with those found in other books.
11. These two pages, collected together from the same source, are in the M. & M. Karolik collection, The Museum of Fine Arts, Boston, Massachusetts. One is illustrated and the other is cited in *M. & M. Karolik Collection of American Water Colors & Drawings: 1800-1875*, (Boston, Museum of Fine Arts, 1962), Vol. II, see illus. no. 350 on p. 271 and pp. 284 (no. 1346), 265 (nos. 1326-1328).
12. For additional information on and examples of works by this artist see Wust, *Virginia Fraktur*, pp. 17-19.
13. Portions of the Howsmon book, including the page with building, are illustrated in Baylor, "John Howsmon," pp. 202-204. The Howsmon building is not a direct copy and is not accompanied by any Masonic motifs.

The author is grateful to Klaus Wust, Pastor Frederick S. Weiser, Mrs. Martha Aycock, Reference Librarian, Union Theological Seminary, and Dr. Karyl Marsh of the National Archives, Washington, D.C., for their help and assistance in preparing this article.



Figure 1. English silk taffeta, 1741-1742, Spitalfields, Anna Maria Garthwaite design. Garthwaite was a leading silk designer. Courtesy Colonial Williamsburg Foundation.

Charleston Textile Imports, 1738-1742

AUDREY MICHIE

South Carolina was not a very large corner of world civilization in the eighteenth century, but in a certain way it reflected a great deal of world trade. Textile goods came from Britain, but many came also via Britain from the Continent, the Middle East, and the Far East. A bale of goods unwrapped on a Low Country plantation, or a chest opened for inspection in a merchant's store room, represented far more than just something useful for clothes or furniture. Behind such things loomed an entire history of manufacture, travel, of difficulties successfully passed, and perhaps new fashions introduced.

Textiles, in fact, were frequent and vital imports into eighteenth century Charleston. The weekly *South Carolina Gazette* listed them regularly. The first page of this newspaper generally reported news, while the remaining pages were devoted to advertisements. An advertisement cost £1.0.0, the price charged including two re-runs.¹ Goods imported from England took up more space than anything else, and the largest single category among these was textiles or textile-related goods. Some lists of these were very long, while others were generalized, such as announcements of fabrics suitable to the season. Textiles were either included among other imports such as oil, wine, tools, ceramics, or paint, or they were given separate billing.

One period of only four years, 1738 to 1742, serves to illustrate particularly well the range of textile goods imported, due to the existence of both the *South Carolina Gazette* and a prominent merchant's letterbook of the period. During those four years, in 273 issues of the *Gazette*, 298 advertisements included textiles in

some form. From this group, 238 textile categories can be isolated, with 821 sub-headings. This does not mean, however, that over a thousand piece goods and ready-made items were reported. More than one textile term may have been used to describe a single category, or lots may have been lumped together. A few left-over items may have been hidden among the fresh, and the quantity of each type not indicated. What the large number of diverse listings probably does indicate is that many terms were in use that were indeed recognized by the consumers of the period.

A Charleston merchant who dealt in imported textiles, along with other goods, was Robert Pringle. A group of 755 letters survive in his letterbook, which encompasses a time span between April, 1737 to April, 1745.² Nearly a seventh of these letters mention textiles, but more important than this statistic is the information the letters provide about the textile trade.

By combining a reading of the *Gazette* with Pringle's correspondence, and reviewing them in the light of contemporary historical and trade developments, an approach can be made to understanding what textiles were imported in South Carolina during the period.

The population of South Carolina in 1738 is not accurately known, since there was no official census until 1790. One estimate sets it at 20,000 whites and 47,000 blacks.³ Charleston was the largest port in the colonial South, and served an extensive area. Trade goods were sent up navigable rivers to Tidewater plantations, north up the coast to Georgetown and the ports of North Carolina, and south to Beaufort and Savannah. There were six new South Carolina towns west of the Tidewater by 1740. Goods were also transported to isolated trading posts and stores, and far into Indian country.

Two local events which temporarily touched the textile trade were an outbreak of smallpox in 1738 and 1739, and a disastrous fire in 1740. During the smallpox epidemics merchants hastened to assure prospective customers that their woolen goods had been kept clear of contamination, both on the ship and by unloading at a special wharf.⁴ The fire destroyed a large part of the business area. Robert Pringle, whose lodgings were above his stores, concentrated on saving his commercial goods, while his wife dashed in and out rescuing what she could from their living quarters.

. . . [the fire] spread itself with that astonishing violence & fierceness that in four hours time it Consum'd about three

hundred dwelling Houses besides a great many stores, & an Immense quantity of Goods & Merchandise and if it had not happened to be flowing water most of the Shipping in the Harbour had been likewise destroyed . . .⁵

The years 1739 to 1744 were marked by complex international conflicts. The War of Jenkins Ear, known as "King George's War" on the American continent, began as a war between England and Spain. It developed into the War of the Austrian Succession, during which England and Austria were allies, and Prussia entered the ranks on the opposing side. In South Carolina this meant forces had to be mustered to protect the southern frontier against Spain. Where uniforms were needed, the wars boosted woolen manufactures in England. Trans-Atlantic shipping did not cease, although there were dangers arising from acts of piracy committed in various national interests. A Spanish prize was reported in the *Gazette* on February 27, 1742. It was thought to be a Spanish sloop carrying one year's pay, arms, ammunition and clothing to the garrison of St. Augustine and reckoned to be worth £16,000. sterling.⁶ The privateer's master, Captain Barnes, arriving March 14, set the record straight. It was not the payship, but "not less rich, being a sloop of about 130 tons Burthen, deeply laden with Bale Goods, Brandy, Provisions &c. to the value of £30,000. sterling."⁷

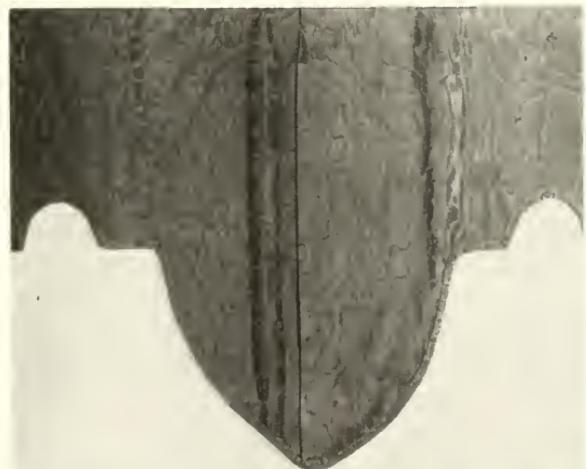


Figure 2. Moreen window or bed valance, English, 1740-1800. Moreen was a worsted weave often "watered" by being folded and put through a damp hot press. Courtesy Colonial Williamsburg Foundation.

A greater influence of such maritime conflicts on South Carolina's textile imports lay in the results of altered European trade routes. What influenced English shipping had an impact upon South Carolina as well, since many of the imports were re-exports through England. Linens were a favorite re-export. Baltic trade increased, and so did imports of varieties of linens from the German states through Amsterdam.⁸ East India Company ships continued to load silks in China, and muslins, painted cottons, and cotton checks and stripes in India. The voyage through the Mediterranean during periods when it was guarded by English warships was generally safe, but to traverse Spanish waters convoys were needed.⁹ Wool was a "home" manufacture, and England's largest single category of exports. If the wars affected wool exports to South Carolina by temporarily diverting more of those goods there, such increases could not have been large. Woolens could be worn half a year at the most in South Carolina.

War with France boosted England's own silk manufacture at Spitalfields, just outside London. When French silks were halted by blockades, English production was called upon to fill the gap. The handicap to English manufacture was the lack of convenient raw silk supplies. Raw silk had to be imported from Persia, China, or Bengal. France had dominated the silk industry since the seventeenth century, and could cultivate silkworms. Lyons silk was the most sought-after in Europe. Production was assured by royal patronage, and skilled weavers and designers turned out fashionable new patterns every year. A new design invention had only recently revolutionized the weaving of flowered silks. Jean Revel had invented a system of shading colors, reducing the sharp contrast of earlier patterns. Revel, who was trained as an artist, also added shadows to the patterns. It was then possible to weave patterns with natural-looking flowers.¹⁰

The climate in England was not suitable for raising silkworms. From the time of the Virginia colony at Jamestown, English thoughts had turned to the American plantations as a possible source of raw silk. Mulberry trees, the "hosts" for silkworms, grew wild in South Carolina, and because of this two efforts were made at sericulture. One began in Purrysburg, South Carolina, in 1734; the other developed in the 1730s in Ebenezer, Georgia, on the Savannah River above the town of Savannah. 455 pounds of raw silk were exported to England from Purrysburg in 1772.¹¹ A filature for throwing silk existed for a time in Savannah, but these attempts, perhaps for lack of adequate financial backing, were not



Figure 3. Calamanco (a worsted patterned weave) made up into a chasuble. Norwich, 1700-1750. Courtesy Colonial Williamsburg Foundation.

to last beyond the American Revolution.

The silks brought to Charleston seem to have been mostly for dress, and particularly ladies' wear. Light silks were deemed suitable in a hot climate, and half silks were serviceable all the year. Robert Pringle found it difficult to sell silk for men, "Silk cloath for men being very little in use here."¹² He had on hand a consignment of 117 yards of Italian silk at 5/6 Sterling a yard. Silks in the *Gazette* lists were figured arramazeens, "newest fashion" brocades, Italian crapes, China, India and Persia damasks, Italian gauze for pavilions, gorgoroons, lutestring, white and silver brocade padusoys, persians, silk plush, satten romalls, taffetas, sarcenet, silk shags, silk balladine, "black silk vellours," and "best Genoa velvet."¹³ Italian silk gauze for pavilions sold for one shilling per yard. "Pavilions" were tent-like canopies that covered high-post bedsteads, and the gauze served as mosquito netting.

Robert Pringle was annoyed with his brother, Andrew, for sending the gauze that he had ordered already made up into pavilions. He had wanted pieces of blue and green gauze. The pavilions that arrived were field-bed size and much too small for tall Charleston bedsteads.¹⁴

Furniture fabrics were usually not specifically designated, though fashions in Charleston household furniture generally followed London styles.¹⁵ Patterns described as large, bold printed designs may have been intended for bed curtains and coverlets, since printed linens and cottons were used for this purpose in England. Window curtains were seeing more frequent use in England at the time. That there were window curtains in Charleston in 1738 is attested to by Mrs. McLellan's advertisement that she had recently acquired a calendaring machine and would calendar "all Silks and Damasks, Callicoes, Bed and Window Curtains."¹⁶ A calendaring machine would press and possibly restore pattern to fabric, although Mrs. McClellen may have done only cleaning and pressing. No turkey carpets were listed, and the only floor coverings were floor cloths, which were heavy painted canvas. The carpets advertised were intended for table tops; one was painted, and may have been made as a wall hanging.

Utilitarian household goods were often specific. Bed ticking and bags of feathers were sent for bedding, or were made up for that purpose as bolsters, mattresses, feather beds, and pillows. Different grades of blankets were imported, along with counterpanes, quilts, and heavy coverings called "bed rugs." Either bed cords or sacking were used to support mattresses. Sheetings was coarse or fine, and came in several widths. Table cloths and napkins were coarse or fine too, but further differentiated into damask or diaper patterns. Diaper patterns were small geometric repeats.

Utility of goods should have been a leading concern to English exporters, but this did not necessarily follow. Some exporters sent off ill-advised cargoes. Robert Pringle warned his correspondents against sending goods of poor quality, of an inappropriate nature, at the wrong season, or badly packed. Damaged goods might have to be sold off at half price. Out of season goods could not always be held over. Woolens, "very lyable to be spoilt by the Moth,"¹⁷ would not last over a summer. In September, 1738, Pringle wrote a letter to a shipper in Hull giving advice on South Carolina trade, on methods of sale, and times of loading rice, and included a list of "Goods Proper for So. Carolina." Of textiles he advised sending "Course Cloths and Heavies, Camblets, Linnen & Cotton Checks,

Huckaback for Tables & Napkins, Diapers & Damask for ditto, Sheetng Linnen, Bagg & Gulix & Holland Cambricks, A large Quantity of 3/4 & 7/8 Gatlix low pric'd, Brown Osnaburgs, Dowlas & Russia Linnen, Non so pretties, White, Bleue & Green Plains for Negro Clothing, Sagathy & Duroys & Worsted Damask. Ship & Duffil Blanketting, Ruggs for Negroes Beds, Bed Blanketts fine, Strouds blue and Red, Felt hatts mens & Boys, Coarse Worsted Stockings for Negroes, Men's & women's Lamb Gloves, Painted Callicoes, Shirts & Handkes., Indian Goods of all Sorts, Scarlett, blue & Superfine Broadcloth, Mens thread Hose of all Sorts, Cordage vizt. Cables, Hawsers & Running Rigging, Osnaburggs Threads, Canvas or Sail Cloth, Hamburg Lines.”¹⁸

The coarse and heavy cloths mentioned were woolens, as were plains, strouds, superfine broadcloths and duffel blanketing. Strouds traditionally were made in the Stroudwater Valley in England, and were often bright red or blue. Superfine broadcloths were some of the most expensive woolen weaves, and the fact that they were broadcloths meant that they were wider than a yard. Until the time of the flying shuttle, invented by Henry Kay in 1733, broadcloths were often woven by two weavers side by side. Woolens were the first type of cloth manufactured in England, and in fact the word “cloth” meant “woolens” in its earliest usage. English woolens were made from high-quality short staple wool that was carded before it was spun. After they were woven, they were fulled to make them additionally thick and compact. Another technically different type of wool manufacture produced worsteds, which were made from long staple wool, combed instead of carded. Worsteds were not fulled, and depended on their weaving method for strength and texture.¹⁹ They were often lighter than woolens; wool and worsted mixtures also evolved in due course. Worsteds lent themselves to a variety of finishes, and might be glazed or watered, which was achieved by passing the fabrics through hot, damp rollers to give them a damask-like pattern. In Pringle's list the worsteds were the camblets, sagathy, duroy and worsted damask, and the camblets were mixed with silk. At the time, Yorkshire was rapidly expanding production of both woolens and worsteds, an indication of a regional shift in English wool manufacture.

Plains were produced in Wales, but not exclusively. They were plain weaves, as the name indicates, not dressed, and varied in price and quality. Bales of white, blue and green plains often were shipped to South Carolina for clothing for slaves. In 1735 a Negro



Figure 4. Blue and white linen damask, Germany, early 18th century. Linens from northern Europe were exported through England in both utilitarian and elaborate weaves. Courtesy Colonial Williamsburg Foundation.

Act prescribed materials suitable for slave clothing, naming Negro Cloth, duffils, coarse kerseys, oznabrigs, blue linnen, checked linnen, coarse garlix, callicoes, checked cottons and scotch plaid.²⁰ "There is as little got by Negro clothing as anything imported here,"²¹ declared Pringle. This might mean that plantation owners were ordering these goods direct, without intermediaries, or it might mean that often too many were sent, causing a temporary glut on the market. Pringle preferred articles that would sell immediately. Articles unsuitable to the area would occasionally be sent north, or he might try them in the West Indies. He was not above returning some to England.

There was very little ready money in Charleston and most financial arrangements depended upon credit. Credit was given from one rice crop to the next, and a ship loading for Europe was paid for after the proceeds of the current crop had been collected,

as Pringle noted:

It often happens that goods have been ship'd at London six months by the time they arrive here Occasioned by the Length of Navigation & other Delays & from that Returns are ship'd here till they are in cash in London is often six months which makes a year . . .²²

Inland credit extended delays in the other direction, especially when sales to far-away trading posts were made. Credit to Indians had had to be limited, and one such regulation in 1739 set the credit at not more than two buckskins.²³

Indian trade was important not only as an exchange for valuable deerskins, but as a means of maintaining friendship with particular tribes. Duffel blankets and strouds were favorite articles with Indians, and Pringle wrote sharply to one shipper because he had not included these woolens in a shipment of guns, pans and tools.²⁴

It is estimated that Charleston merchants dealt with about three hundred Indian traders.²⁵ The better-educated dealt with Charleston merchants in town, while others stayed in the back country most of the time. Trading stores were set up at Savannah, Augusta, the Congarees and Ninety-Six. Every spring traders came to Charleston either overland, with strings of twenty or thirty packhorses, or by river, using periaugers, canoes or flatboats to freight their loads.

In his list of "Goods Proper," Pringle mentioned the need for linens. In September, 1740, he wrote further that "There is a great quantity of linens always pour'd in here."²⁶ One firm, Stead, Evance & Co., had recently sent "an extraordinary assortment of Linnens."²⁷ Linens did predominate as imports. Oznaburgs, garlix, silesias, cambrics, checked linens, bag hollands, brown hollands and gulix hollands were imported over and over. Some fabric terms no longer showed a direct relationship to their place of origin, and had become general terms for recognizable fabrics.

"Hollands" had derived their name from the country from which they were exported. Made in a number of places, they were finished in Holland. During the 16th, 17th, and 18th centuries linens were sent from Spain, France, Belgium, Germany and Poland to be bleached in Haarlem. There the linens underwent weeks of treatment with potash and buttermilk and long sessions of stretching and dampening in the bleachfields. Skilled finishers

called "pakkers" smoothed the fabric with wooden sticks and rollers.²⁸ There were also bleachfields in Ireland, which had an ideal climate and plenty of green grass for this process. William of Orange had been the first to boost Irish linen production. The Board of Trustees of Linen and Hempen Manufactures was founded in 1711, and annual grants were given by Parliament to encourage production and exports.²⁹ The Scottish linen industry was also on the rise, especially after the Act of Union of 1707 lifted the ban on Scottish linen imports into England. One delicate linen produced there was cambric.

In England, perhaps because wool manufacture was so entrenched, linen manufacture was more sporadic. Sail cloth, however, seems to have been a national art, and Charleston sail makers preferred English manufacture to any other. Andrew Pringle unfortunately sent another kind to his brother. "I don't know what to do with the Sail Cloth," wrote Robert. "It lies on hand being very unsaleable, & esteem'd not at all good, so that none of the Sail Makers here will Recommend or advise to buy it when wanted. I find that English Sail Cloth or Duck is most saleable & in demand here from No. 1 to No. 7 . . ."³⁰

Robert Pringle had one particularly difficult linen commission. His "most tedious and long-winded" sale had to do with chests of linen and twenty pieces of unsold garlix. He first mentioned the unsold lot in April, 1737.³¹ In July, three unopened chests were sent to Boston, plus one partly sold chest, to see if they would do better there. Four other chests, partly sold, stayed in Charleston. John Hunter, the original shipper, demanded an advance on his goods, and was denied one. Since the linens had not sold at the last crop of rice, no proceeds were available for payment. The present crop of rice had failed, and the shipper was forced to wait until the next crop in October.³² In December, there were still three Hunter & Co. chests left; Pringle grumbled that his commission of five per cent was hardly worth the sale.³³ Hunter asked him to load a snow with rice for him, but Pringle had not realized enough from the linens to do so.³⁴ Finally he drew bills of exchange on Hunter & Co. and loaded up a ship, explaining that this financial action would not have been necessary if the linens had been the kind that would sell.³⁵ The rice went off before another Hunter letter arrived, telling Pringle not to draw on the company. Luckily the rice arrived safely and sold in a good market, so the venture ended well.³⁶

Cotton cloth production in England had not begun at this time. Although cotton wool, as raw cotton was called, was imported from Turkey by the Levant Co., it was mainly used for stuffing quilts or for candle wicks. Cotton yarn had been imported into England for several centuries, and used in fustians, a fabric made of linen warp and cotton weft.³⁷ It had also been used in weaving cotton linens, which had a reverse arrangement of cotton warp and linen weft. Both fustians and cotton linens were made into checks, or used for printed fabrics.

Experiments in English textile printing had been under way for some time. The impetus had come from the India painted cottons, which had become very popular. They had been brought to England first in the early seventeenth century by the East India Company. Two import bans had been levied against them at the instigation of other English textile interests, one in 1701 and one in 1721, but these embargos did not harm the printing industry. Printing was still allowed on linens and fustians, calicoes were not banned, and re-exports were exempt. India painted cottons were decorated by hand, starting with an outline and then filling in the colors with a special brush, all except the indigo blue, which had to be resist dyed.³⁸ Each step required considerable time, though the finished pieces were brilliant works of art which could be washed without fading.



Figure 5. India. Mordant—painted textile, first quarter 18th century. These were washable and colorfast. Courtesy Colonial Williamsburg Foundation.

English printing employed wooden printing blocks, and was done with mordants, or metallic oxides, such as alum. Mordants made up into a kind of paste were rolled on the printing blocks and printed onto the fabric, different mordants having been selected for their known reaction to various dyes. After printing, the cloth was dipped into one dye bath of madder, and when it was removed from the bath, varying shades of red, rose, purple or brown were produced. This polychrome mordant printing was known by 1740.⁴⁰ Blue could be added, if desired, by wax-resist, and green by overpainting with yellow.

India cotton stripes and checks were also imitated in Europe and England; these were dyed in the yarn. By alternating colors of groups of warps or wefts, or both, check or stripes or plaids were achieved. Some of them were given colorful names such as "sooseys" and "romalls,"⁴¹ or were known under the general term of "ginghams." A number of oriental-sounding fabric names came into use to describe the possible variations. Some English versions intended for Africa had the most elaborate names, such as "bejutapants," "neganepants," "nicconeys," and "chelloes."⁴²

Rice brought wealth to Charleston and rice made possible the sale of textiles and provided mercantile success to men such as Robert Pringle. Another crop soon contributed to South Carolina's financial development. In 1741 and 1742, experiments in the cultivation of indigo began. One of the first successful growers of this dye plant was Eliza Lucas, who had received various seeds from her father in Antigua for experimental use on the family plantation at Wappoo.⁴³ Success in having a healthy crop grow from seed was not all there was to the cultivation, however. The plants required an extensive fermenting, draining, and beating process after gathering; only a solid residue remained from the process to be dried and cut up into squares.⁴⁴ South Carolina indigo fed England's textile industry until after the American Revolution.

Most textile goods arrived in South Carolina by the piece, and were made up after arrival either by professional needlewomen, tailors or upholsterers, or were taken home to housewives and slaves. There were two men advertising in Charleston as tailors during this period. William Valance⁴⁵ and Thomas Roybauld.⁴⁶ Another artisan by the name of John Tyler did work such as making stays for women and stiffening coats for children.⁴⁷ In spite of this, Robert Pringle deemed neither the workmanship nor the cloth or "furniture" found locally to be good enough for his own tastes⁴⁸ and sent off on three occasions to his London tailor for

suits. There were two mantuamakers, Katherine Wills⁴⁹ and a "Mrs. Jones."⁵⁰ There was a milliner, Sobieskie Strahan, who made "all sorts of widows' dresses, child bed linnen, children's Frocks, Manteels and Mantelets."⁵¹ These were fancy wares, and millinery was not yet a term restricted to hats. Judith Thomas,⁵² Mrs. Glazer,⁵³ and Mary Hext⁵⁴ all advertised their willingness to teach needlework, and Mary Gittens would practice the art as well.⁵⁵ Jane Voyer offered to draw patterns for anyone who needed them. She offered to take girls over twelve years of age and teach them embroidery, lace-work, tapestry and "any other sort of needlework."⁵⁶ Ten miles outside of Charleston, Martha Logan offered to board and teach children "to read and write, also work plain work, Embroidery, tent and cut work, with all other necessary works."⁵⁷

Hand work was a fashionable pastime for ladies. There was a fashion for lappets in 1742; lappets were two lengths of shaped lace that hung down on either side of the head. They were made of pillow lace or "bone lace," as it was called, since it was formed on a pillow with bobbins that were usually made of bone. Robert Pringle ordered for supplies of Brussels lace because "the women here come very much into wareing of Bone Lace."⁵⁸ Eliza Lucas, when not growing indigo, or otherwise occupied, tried making lappets. In her planned schedule she spent

the first hour after dinner . . . at music, the rest of the afternoon in Needle Work till candle light . . . Tis the fashion here to carry our work abroad with us so that having company, without they are great strangers, is no interruption to that affair; but I have particular matters for particular days, which is an interruption to mine . . . You may form some judgment what time I can have to work on my lappets. I own I never go to them with a quite easy conscience as I know my father has an aversion to my employing my time in that poreing work, but they are begun and must be finished . . .⁵⁹

Plain sewing and mending were more necessary accomplishments. Advertisement of slaves for sale sometimes touted an ability to "work well with a needle,"⁶⁰ or might point out that a woman was a particularly good washer, ironer and dresser of linen.

Some idea of lengths of fabric can be obtained from the advertisements for lost or stolen goods. Twenty-one yards of blue tabby



Figure 6. Pair of lace lappets, 18th century. Lappets were a form of lady's head gear in the 1740 period and hung down on each side of the face. Courtesy Colonial Williamsburg Foundation.

"in breadths for a woman's suit," were stolen from Judge Trott's house in the fall of 1738, plus a yard of brocade wrapped up in tabby.⁶¹ Eighteen yards of white India damask were among fabrics and clothes taken when someone broke into Captain Townshend's house; also stolen were two pieces of corded drugged totaling eighty-nine yards.⁶² Also taken were six pieces of thirty-six yard lengths of Irish linen, and one piece of seventy-three yards. Nine stolen pieces of cambric measured between seventy-nine and two hundred and thirty yards each.

Widths were occasionally stated. Garlix, a frequent import, was sent to South Carolina in widths of three-quarters of a yard, seven-

eights of a yard, or a yard. "Ells" were given as units of measurement. The English ell had been fixed by Henry I at forty-five inches, while Scottish ells were thirty-seven inches and two-tenths, a yard and a thumb. Flemish ells were twenty-seven inches or a yard. French ells, the widest, were fifty-four inches. "Nails" were measurements for checks. A nail was two and a quarter inches, so that a "ten-nail check" was twenty-two and a half inches wide. Some weaves were expected to be narrow, such as German stripes. They were named for their weave, and had neither colored stripes nor were exclusively German, since many were made in England.

The types of ready-made clothes in the 1738-1742 advertisements are listed here, using the original language for each term:⁶³

Aprons:

Breeches:

broadcloth, buckskin, hair shag, honeycomb

Caps:

blue and white mill'd and strip'd, children's, cotton, cotton and worsted, double worsted, hair, hart, jockey, men's velvet, mill'd, negro, riding, short, silk, strip'd, holland, women's and children's single and double cotton, women's and girls' velvet

Cloaks:

cap'd with velvet, fine scarlet, scarlet, short, trimm'd, women's and girls', women's short red coats

Coats:

broad cloth, duffil, men's great, men's large cloth riding, quilted, silk, silk quilted, silk and stuff quilted, women's and girls' quilted

Frocks:

buntin'

Gloves:

cotton, for mourning, good assortment of fine glaz'd, high topp'd, of all sorts, white and colour'd, women's white

Gowns:

bird's eye cotton, cotton, cotton and silk, dimity cotton, women's cotton, women's holland

Handkerchiefs:

bandannoe, black gauze, callico, cotton, India silk, Italian crape, linnen, lungee, painted cambrick, romall, soosey

Hats:

and hat lining, castor, coarse, felt, fine, girls' ivory, silver and gold, gold and silver, lac'd, laced, ladies, Leghorn, men's fine beaver and coarse, straw, superine beaver and felt

Hoods:

velvet, women's velvet

Hoops:

bone, cane, girls', newest fashion, of all sizes, of all sorts, women's

Hose:

coarse thread, fine thread, for men, women and children, Genoa thread, nun's silk and pearl colors, silk and silk thread, woolen, worsted

Jackets:

flannel, sailors'

Lappets:

Brussels, lace, Mechlin

Mittens:

cotton, girls', colour'd

Petticoats:

calico, calico quilted and border'd, drawn and hooped, hoop, quilted, russel, silk quilted, stuff quilted, women's and girls', work'd under, wrought, wrought dimity

Pilgrims

cloth, velvet

Ready-Made Cloathes:

best sort of Negro, for land and sea, large variety of the newest fashion, men's and boys' cloth, fustian or linen, Negro, of many kinds for men, women and children, summer cloathes of all sizes, sundry woollen

Ribbands:

fine, flower'd, padusoy, peruke, plain, rich white silver, silver

Shoes:

callimanco, laced, ladies', men's, women's, girls', silk, stuff damask, ticken, women's flower'd damask

Stays:

children's, girls', of all sizes

Stockings:

children's worsted, fine black, men's silk, silk and thread, superfine worsted, thread, very fine cotton and thread, worsted

Trowsers:

blew pea, strip'd

Umbrelloes:

Waistcoats:

holland, knapd duffield, ticken, worsted, wrought

Other ready-made items were bedding and table linens, fabric buttons such as mohair, sewing silks and threads, silks and crewels for embroidery, twine, ropes and fishing lines, spun cotton for candle wicks, coffin furniture, and in one instance "an easy chair lin'd with green English silk damask and a couch with squab and pillow."⁶⁴ The ready-made articles of all sorts, as they were listed, comprised between a quarter and a third of total textile items advertised during the period.

The exact number of such textile goods imported into Charleston cannot be counted. However, from this study of a four-year span of advertisements, it is obvious that a large variety of current goods was available. Further examination of the remaining forty years of the *South Carolina Gazette*, from 1732 to 1776, should make the picture even more clear. Such broad-ranging research would provide significant conclusions regarding the importance of imported textiles in pre-revolutionary South Carolina.



Figure 7. Child's or lady's pattens, leather and silk, English, 1730-1740. Ready-made shows were frequent Charleston imports.

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FOOTNOTES

1. Hennig Cohen, *The South Carolina Gazette, 1732-1775* (Columbia: University of South Carolina Press, 1953), p. 10.
2. Walter B. Edgar, ed. *The Letterbook of Robert Pringle* (Columbia: University of South Carolina Press, 1972), hereinafter cited as *Pringle Letterbook*.
3. M. Eugene Sirmans, *Colonial South Carolina A Political History, 1663-1763* (Chapel Hill: University of North Carolina Press, 1966), p. 207.
4. *The South Carolina Gazette*, November 2, 1739, hereinafter cited as *Gazette*.
5. *Pringle Letterbook*, 1:271.
6. *Gazette* Supplement to February 27, 1742.
7. *Ibid.*, March 20, 1742.
8. Leslie A. Clarkson, *The Pre-Industrial Economy in England, 1500-1750* (New York: Schoken Books, 1972).

9. Ralph Davis, *The Rise of the English Shipping Industry in the Seventeenth and Eighteenth Centuries* (Newton Abbott: David & Charles, 1962), pp. 30-31.
10. Peter Thornton, *Baroque and Rococo Silks* (New York: Taplinger Co., 1965), pp. 118-119.
11. Robert L. Meriwether, *The Expansion of South Carolina, 1727-1765* (Kingsport, Tennessee: Southern Publishers, Inc., 1940), p. 37.
12. *Pringle Letterbook*, 1:267.
13. Audrey Hadow Michie, "Goods Proper for South Carolina: Textiles Imported 1738-1742" (Unpublished thesis, University of North Carolina at Greensboro, 1978), pp. 66-92.
14. *Pringle Letterbook*, 2:660.
15. E. Milby Burton, *Charleston Furniture 1700-1825* (Columbia: University of South Carolina Press, 1955), p. 13.
16. *Gazette*, January 5, 1738.
17. *Pringle Letterbook*, 2:525.
18. *Ibid.*, 1:31.
19. Herbert Heaton, *The Yorkshire Woolen and Worsted Industries from the Earliest Times up to the Industrial Revolution* (Oxford: Clarendon Press, 1965), pp. 260-263.
20. Thomas Cooper and David J. McCord, eds. *The Statutes at Large of South Carolina*, VII, 396, quoted in Peter H. Wood, *Black Majority* (New York: Alfred A. Knopf, 1974), p. 232.
21. *Pringle Letterbook*, 1:244.
22. *Ibid.*, 1:49-50.
23. Meriwether, *Expansion of South Carolina*, p. 189.
24. *Pringle Letterbook*, 2:646.
25. Meriwether, *Expansion of South Carolina*, pp. 15-16.
26. *Pringle Letterbook*, 1:243.
27. *Gazette*, August 16, 1740.
28. Louis A. Driessen, "The History of the Textile Crafts in Holland," *CIBA Review* No. 48 (1944), pp. 1727-1760.
29. L. M. Cullen, *Anglo-Irish Trade 1660-1800* (New York: Augustus M. Kelley, 1968), p. 47.
30. *Pringle Letterbook*, 1:372.
31. *Ibid.*, 1:10.
32. *Ibid.*, 1:24-35.
33. *Ibid.*, 1:52.
34. *Ibid.*, 1:66.
35. *Ibid.*, 1:111.
36. *Ibid.*, 1:144.
37. Alfred P. Wadsworth and Julia de Lacy Mann, *The Cotton Trade and Industrial Manchester 1600-1780* (Manchester, 1931), p. 15.
38. Stuart Robinson, *A History of Dyed Textiles* (Cambridge: M.I.T. Press, 1969), p. 24.

39. John Irwin and P. R. Schwartz, *Studies in Indo-European Textile History* (Ahmedabad, India: Calico Museum of Textile, 1966), pp. 80-91.
40. Florence Montgomery, *Printed Textiles English and American Cottons and Linens 1700-1850* (New York: Viking Press, 1970), p. 22.
41. Wadsworth and Mann, *The Cotton Trade*, p. 126.
42. *Ibid.*, p. 151.
43. Elise Pinckney, ed. *The Letterbook of Eliza Lucas Pinckney, 1739-1762* (Chapel Hill: University of North Carolina Press, 1972), p. 16.
44. H. Roy Merrens, *The Colonial South Carolina Scene, Contemporary Views, 1697-1774* (Columbia: University of South Carolina Press, 1977), pp. 145-159.
45. *Gazette*, May 8, 1742.
46. *Ibid.*, November 24, 1739.
47. *Ibid.*, March 16, 1738.
48. *Pringle Letterbook*, 2:709.
49. *Gazette*, March 29, 1739.
50. *Ibid.*, June 1, 1738.
51. *Ibid.*, September 14, 1738.
52. *Ibid.*, December 19, 1741.
53. *Ibid.*, February 2, 1738.
54. *Ibid.*, August 6, 1741.
55. *Ibid.*, June 4, 1741.
56. *Ibid.*, July 28, 1739.
57. *Ibid.*, February 27, 1742.
58. *Pringle Letterbook*, 2:437.
59. *Eliza Lucas Pinckney Letterbook*, pp. 34-35.
60. *Gazette*, February 13, 1732.
61. *Ibid.*, September 14, 1738.
62. Michie, "Goods Proper," pp. 66-92.
63. *Gazette*, December 14, 1738.
64. *Gazette*, January 11, 1739.

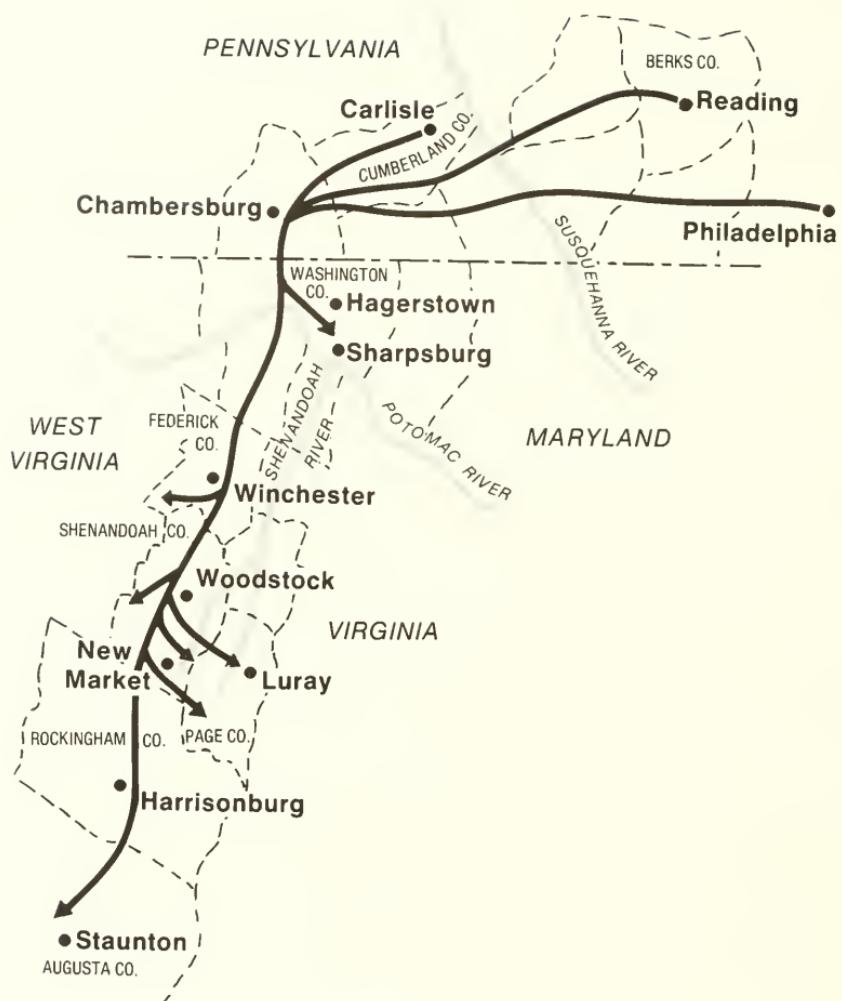


Figure 1. Counties of the northern Shenandoah Valley, western Maryland, and Pennsylvania, showing by the arrows areas where Pennsylvania ironmasters settled in Virginia. Map by Jim Stanley.

The Redwell Ironworks

H. E. COMSTOCK

Among iron-producing areas in early America, Virginia ranked high in the total tonnage of cast iron run by merchant blast furnaces. The colony, in fact, saw America's first attempt to operate a furnace at the ill-fated Falling Creek works located above Jamestown on a tributary of the James River. The venture ultimately failed in 1622,¹ and it was not until the first quarter of the eighteenth century that Virginia began to make significant advances in her iron industry. From that time on, a steady succession of blast furnaces was constructed in the colony. The most significant production of cast iron in Virginia, however, is more closely associated with the end of the eighteenth century and the first quarter of the nineteenth. Entrepreneurs in the field had discovered that the Shenandoah Valley, despite its lack of readily-available river transportation, was almost ideally suited to iron production. Rich ore beds dotted the landscape, and the predominant mineral of the Valley was limestone, a product vital to furnace operations since it was used as a flux during the smelting process.

Not surprisingly, iron production in the Shenandoah Valley was dominated from the first by prominent Pennsylvania men who, for the most part, had already operated works in either Pennsylvania or Maryland. Furnaces required a vast acreage of woodlot, and it was not unusual for one operation to acquire many thousands of acres for that reason. Cheap and abundant land in Virginia, in addition to the availability of cheap slave labor, were heady enticements to the Valley for northern iron men. Entire Pennsylvania ironmaking families, such as the Pattons, Hughes, Millers, Arthurs, and Potts invested heavily in Virginia real estate

for the purpose of erecting furnaces: Isaac Zane, scion of a wealthy Philadelphia Quaker family, operated the extensive Marlboro works from the 1760s until the early 1790s.² A contemporary of Zane's, Mark Bird, invested in Mossey Creek Furnace in the Valley after a successful venture in managing the huge Hopewell works in Pennsylvania. Both Zane and Bird contributed the services of their furnaces to the Revolutionary cause, and both suffered financially for their patriotism. The industry grew at an even faster pace after the Revolution, however. Material in the MESDA Research Files indicates that as many as 23 blast furnaces and ironworks were operated in the Valley between the 1740s and 1820, and most of those were put into blast after 1780.

Continuing the trend of Pennsylvania investment in the Virginia iron industry after the Revolution was Derick Pennybacker (1737-1801),³ from Berks County, Pennsylvania, who had worked with Mark Bird at Hopewell Furnace. Pennybacker, in fact, had purchased a "water corn grist mill and 195 acres of land" on Tulpehocken Creek in Berks County from Bird in 1770 for the sum of £762:10:0.⁴ Pennybacker, a wagonmaster by trade, held the rank of Captain during the Revolution; he had married Hannah DeHaven (1737-1825) in 1756.⁵ Pennybacker's name does not occur in Berks County tax lists after 1781,⁶ and it is believed that he may have moved to Sharpsburg, Frederick County, Maryland during that year. Though there is no documentary evidence, family records indicate that he may have purchased Hughes' Mount Aetna Furnace there.⁷ Additional undocumented oral tradition credits Pennybacker with having constructed his own furnace in Maryland, only to have it destroyed by a flood.⁸

In the 31 March, 1786 issue of *The Maryland Journal* an advertisement appeared offering the lease of the Mount Aetna works,⁹ and since it is known that Pennybacker was in Virginia by that time,¹⁰ it seems unlikely that he had owned the Maryland furnace. Though the precise date cannot be established, Pennybacker moved to Shenandoah County, Virginia sometime during 1783 or 1784, where he either established or purchased Pine Forge on Smiths Creek southeast of the town of New Market. According to oral history, Smiths Creek had been given its name due to the number of blacksmiths and forges situated on its banks. In 1785, a census of whites in Shenandoah County listed Pennybacker's household with 64 souls, a dwelling and three other buildings on Smiths Creek four miles below New Market.¹¹ This count evidently included not only Pennybacker's family, but also his workers and

their families, some of whom may have come with Pennybacker from Maryland.

It is not unreasonable to speculate that Pennybacker's former association with Mark Bird may have had something to do with his own move to Virginia. Bird had formed a partnership with Henry Miller to build Mossey Creek Furnace in Augusta County in 1779.¹² The Mossey Creek works were not more than fifty miles south of Pennybacker's location.

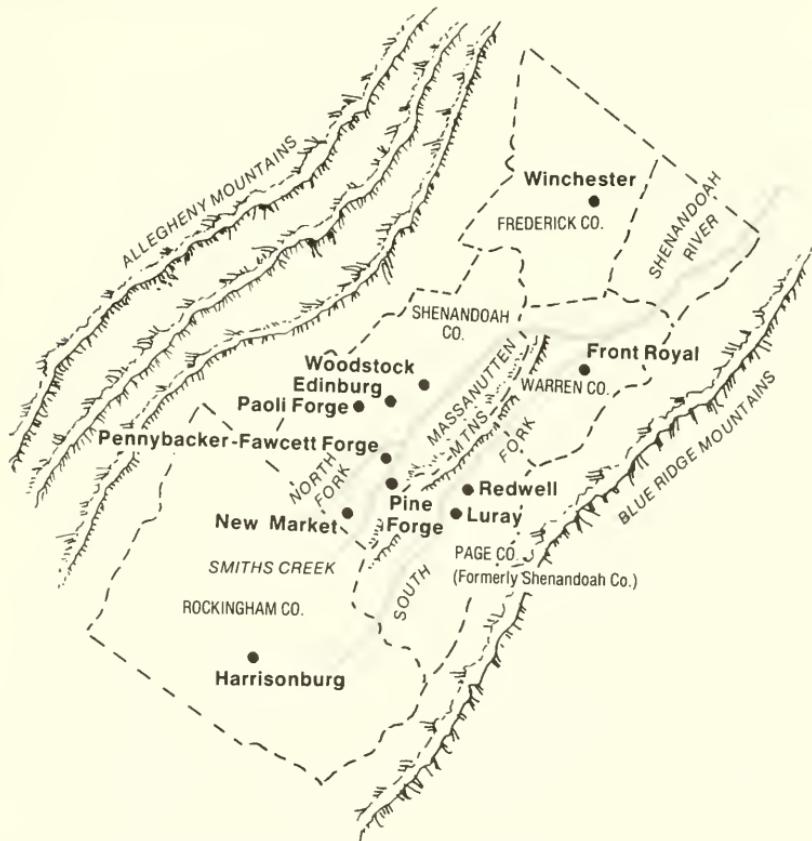


Figure 2. The Shenandoah/Page County area of the Shenandoah Valley, showing the location of the Redwell Iron Works and its forges. Map by Jim Stanley.

In June of 1786, Derick Pennybacker entered partnership with Benjamin Fawcett to purchase a forge or slitting mill from Mounce Byrd. Also located on Smiths Creek, this operation was situated on three acres of land; the purchase price was £350.¹³ The Pennybacker family also later operated Paoli Forge¹⁴ west of the town of Edinburg. Built ca. 1799-1800, this operation was known as Union

Forge after 1808.¹⁵ Paoli was, no doubt, the "New Forge" listed in one of Pennybacker's account books of the period. The works was also mentioned in a contract Pennybacker later signed with Richard Patton and David Golliday.¹⁶ Pennybacker's initial business venture, then, lay in the operation of forges, and he continued to add to such holdings through the end of the eighteenth century. Each of these operations was primarily in business to convert raw pig iron into wrought iron.

Though it seems somewhat unusual that Pennybacker had invested in a forge before constructing a furnace which could supply the forge with iron, he actually wasted little time in starting his main works eighteen miles northeast of the Pine Forge site in what is now Page County. Located near the present town of Luray, east of the Massanutten Mountain Range opposite New Market, it appears likely that Pennybacker's furnace was constructed about 1786. To date, no documentary evidence has been found to pinpoint the construction date, though Henry Mercer's *The Bible in Iron* illustrates both a dated fragment and a complete stove plate (Figs. 323 and 324 in Mercer, Figs. 9 and 10 here) from a six plate stove. The front plate of this stove bears the legend "D. PENNEBACKER HIS REDWIL (sic) FURNACE SEPT 21, 1787." Considering the usual custom followed by furnaces, the date displayed on the stove could have represented either the date when the works was put into blast, or the first date a stove of that pattern was run.

In either event, Redwell Furnace represented the supply source for Pennybacker's forge operations, each of which were prepared to produce bar iron from the pigs run at Redwell. The furnace and its forges west of the Massanuttens together constituted the Redwell Ironworks, which was actually a joint business venture of Derick Pennybacker, John Jordon, and Richard Patton. The firm operated as Pennybacker, Jordon & Co.¹⁷ Though little information concerning Jordon has been found, Patton, like Pennybacker, was from Berks County, Pennsylvania. He last paid taxes on an iron furnace in Tulpehocken Township in Berks in 1785,¹⁸ suggesting that he emigrated to Virginia with Pennybacker to join in the Redwell venture.

Both the distance and the terrain separating Pennybacker's operations must have conspired to create logistical problems for the Works. First of all, the firm had chosen a poor geologic site to purchase or construct a forge if a furnace was planned for later construction. To reduce the great expanse of transporting ore, furnaces were usually built within three to five miles of an ore bank, and

there is no indication that such a bank existed near the forge. That may well explain why the furnace was built east of the Massanutten Range, but still unclear are the reasons why the firm was content to transport pig iron to the forges west of the mountains, having to ferry across the South Fork of the Shenandoah River in the process. Most other American ironworks carried on all their operations on one side, certainly a more efficient plan from the standpoint of economics.

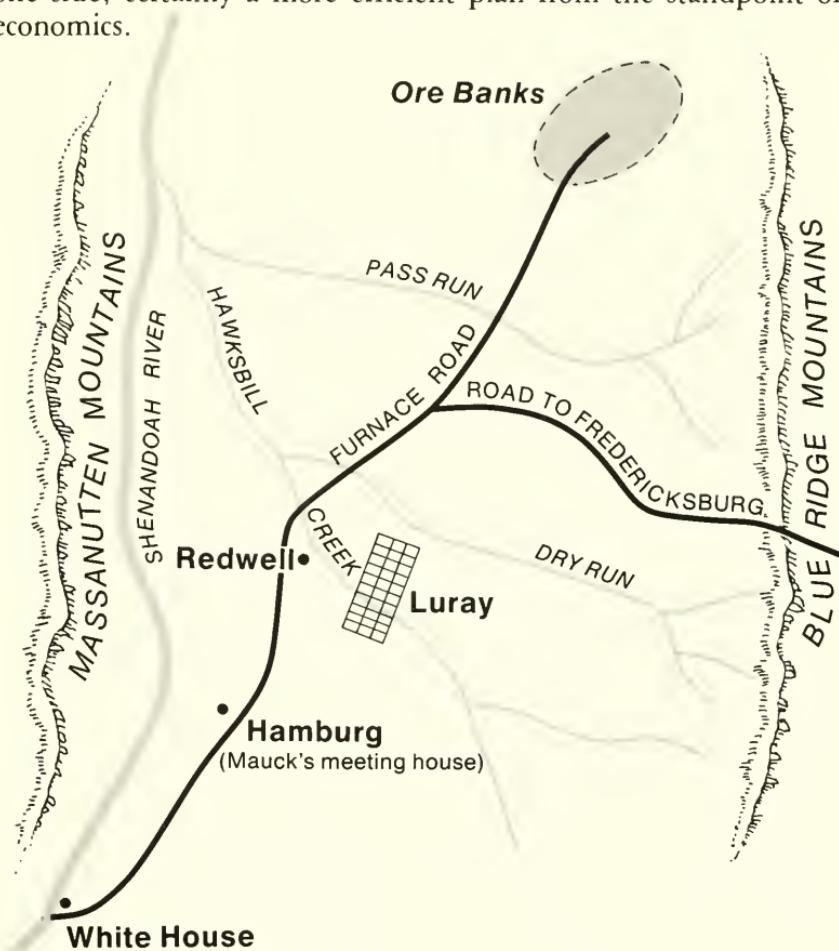


Figure 3. The site of Redwell Furnace, showing roads and watercourses in the area.
Map by Jim Stanley.

No description of the firm's forges are known to exist, though a few documents assist somewhat in understanding the furnace complex itself. Since both Pennybacker and Patton had been associated

with Pennsylvania furnaces, the construction of the Redwell works likely followed its northern counterparts in plan and dimensions. Furnace stacks were seldom more than thirty-five feet in height, and were usually built with two arches, one serving the casting floor and the other the tuyere or air pipe, which at Redwell was fed by bellows.¹⁹ Most of the area surrounding a furnace stack was usually enclosed by sheds to keep out weather. Furnaces were usually constructed next to a hill or bank in order to provide the easy construction of a bridge to the top of the stack for charging the furnace. At Redwell, the bridge was open for approximately 25-30 feet, then covered by a bridge house for 20 feet as protection for the carters.²⁰

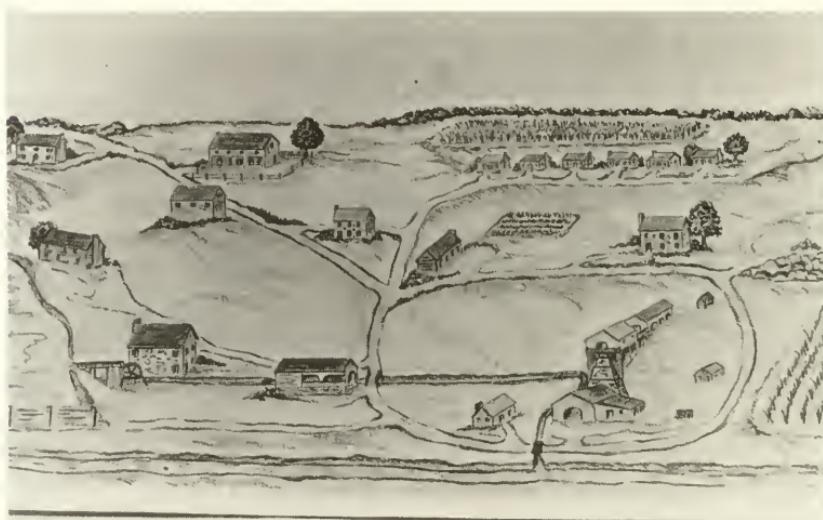


Figure 4. Conjectural view of the Redwell Furnace complex; in the foreground are Hawksbill Creek, and, left to right, the grist mill, sawmill, and furnace with its attendant bridge house and coal shed. On higher ground are the family residences, worker's cabins, stables, smith shop, and other features. This view is based upon both documentary and physical evidence. Drawn by Kate Schultz, Winchester, Va.

The proximity of water for powering bellows for the air blast, and for other machinery, was paramount. Though strong-flowing Hawksbill Creek passed the Redwell site, it was not used as a source of power. Instead, Yeager Spring, as it was later called, was located on the furnace site, and provided a multi-million gallon daily flow. The spring was dammed with a barrier of log construction, in-filled with furnace cinders,²¹ producing a millpond of about one and a half acres in size. The flow reached the furnace, some 500 feet dis-

tant, by means of an excavated millrace²² which spilled into Hawksbill Creek²³ (Fig. 4). Also situated on the race between the spring and the furnace were a grist mill and a sawmill;²⁴ the former was of stone construction (at least the foundation), and provided a necessary service both to the furnace families and the numerous animals utilized by the Works for transportation. Operation of the two subsidiary mills required a certain amount of monitoring so that the flow of water reaching the furnace wheel was not drawn too low, thereby reducing the blast.²⁶

Behind Redwell's bridge mound was located a large ore and charcoal house, which, like the bridge and bridge house, was constructed of logs, planking, and clapboards.²⁷ The enormous quantities of charcoal consumed by such a furnace required sound storage to keep it dry, since damp fuel was useless. The casting house surrounding the lower portion of the furnace stack was of the same construction, though without flooring since much of the furnace's production was run directly in the sand of the casting floor. Evidence exists as well that there was a second casting house at Redwell, also of log construction, and intended for use as a flask-casting area where holloware such as kettles and skillets were run.²⁸

Most furnace operations were surrounded by a complex of dependencies and dwellings, and Redwell was no exception. Some of the furnace workers lived at the site, judging from one account which listed "six houses for workmen 16-20 feet square, log with hard floors and sealed with clapboard."²⁹ Other buildings included in the area were a store, a kitchen/dining hall for the workers, a smoke house, and a dairy. There were two stables at Redwell, one of limestone and the other of log and "half inch planking,"³⁰ and a smith shop of similar construction evidently stood nearby. All furnaces required a smithy, both for making and repairing tools and for providing components such as stove bolts and the stretchers used to assemble stove bases. A grain storage house of unknown construction was located near the grist mill.³¹

Three stone dwellings still stand at the furnace site. One of the buildings was the house of Derick Pennybacker, and another was that of his son, Benjamin, who lived at the furnace until he built a house on Smiths Creek about 1796. The third dwelling was that of Jacob Rivercomb, whose association with Redwell is unknown. The Ironworks land holdings were moderate, comprising some 2,192 acres, including two ore banks.³²

The history of the Redwell Ironworks was a long one, covering a chronological span from 1786 into the mid-nineteenth century.³³



Figure 5. Fragment of a cast iron pig excavated at the Redwell Furnace site. LOA 16". Photograph by the author.

During the 1786-1820 period of study treated here, the Works was owned by two different firms, and leased by two others. Unfortunately, information regarding Pennybacker, Jordon & Co., the founding firm, is sketchy and incomplete. The records which do exist provide information on a daily iron production that would be considered normal for a furnace of the period. Typical of a large merchant furnace, Redwell was primarily involved with the production of pig iron during its early years, with cast products providing a lucrative secondary production until later, when castings comprised a larger proportion of sales. The principle market for pig was the forges owned by the Works, where the cast metal was converted to dimensioned wrought iron for the various trades that required it. Both pig iron and finished castings, however, were shipped to Philadelphia and Baltimore markets; a Pine Forge account book contains an entry for 16 April 1799 indicating that a £0:2:6 postage fee had been paid to the *Philadelphia Gazette*. It would have been considered good business practice to keep up with the affairs of cities where markets lay, and with the advertisements of ironmongers in such places. Another substantial market for Redwell products was Fredericksburg, situated on the Rappahannock River for ready access by oceangoing vessels.³⁴

The enormous weight of cast iron, in fact, necessitated river transportation whenever possible. The South Fork of the Shenandoah River was the principle waterway which carried Redwell iron, running north to a junction with the Potomac River at Harper's Ferry. A road from the furnace to the river reached the river where present U.S. Route 211 crosses the South Fork. At that point stood an inn and mercantile depot known as the "White House" (Fig. 3), which is still standing today. Redwell's pig and castings departed for northern markets from the landing at that

site.³⁵ Barges evidently were used to transport the iron; a Redwell ledger entry for 14 July 1796 lists the purchase of "Old irons of a bote (sic) Body 0:18:0," possibly salvaged from just such a vessel.



Figure 6. A pair of cast andirons found at the Redwell Furnace site, HOA 14½", WOA 10¾". Private collection. Photograph by the author.

Operating an ironworks was not without various sorts of problems, some of them weighty. Like many other furnaces, the Redwell works was subjected to considerable litigation during its history, much of it arising from leases which had been made. There was the usual travail of obtaining and keeping labor, and the complexity of the Works itself provided a constant maintenance worry. Benjamin Pennybacker remarked at one point that "The machinery of the furnace is wanting repairs every week."³⁶ The operation was subject to all manner of disasters, both natural and man-made; a later account recorded "To Rebuilding Bridge House which was consummed (sic) by Fire in June 1804 and rebuilt in the same month . . . £37.10.0." In the spring of that same year the milldam had been "swep off by water" and required complete rebuilding at a cost of £135.³⁷ When such phenomena caused the furnace to go out of blast, the cost to the proprietors was very dear indeed.

Derick Pennybacker continued to operate Redwell Furnace until April of 1796, when he leased the furnace to his former associate, Richard Patton. Patton had formed a partnership with David Golliday, so the furnace began operation under the new firm of Patton & Golliday.³⁸ At the same time Pennybacker apparently leased Pine Forge to his son Benjamin, who had taken

George Mayberry and Isaac Samuels as partners; Pine Forge was then operated as Benjamin Pennybacker & Co. During this same period, Derick may have sold his interest in the second forge on Smiths Creek to his former partner in that venture, Benjamin Fawcett. Pennybacker evidently began construction of Paoli Forge on Stoney Creek west of Edinburg at this time. An 1800 account book for Pine Forge includes a notation concerning the hauling of material to the "New Forge," which was probably Paoli.



Figure 7. A one-gallon cast iron pot excavated at the Redwell Furnace site. Private collection. Photograph by the author.

Patton & Golliday signed a four-year lease contract with Pennybacker, agreeing to pay as rent 80 tons of pig iron annually for three years, and 45 tons the fourth year. Pennybacker granted to the new firm the use of all the furnace buildings, patterns, molds, tools, and teams. Though he retained the operation of the grist and sawmills for himself, he agreed to charge no fee to Patton & Golliday for either milling or sawing timber. The three stone dwellings on the furnace site were not included in the lease, and Patton agreed not to purchase either wood or woodland within six miles of the furnace.³⁹ The new firm further agreed to furnish

Pennybacker with 20 tons of pig iron per annum in exchange for 5 tons of bar iron, if Pennybacker elected to build a new forge.⁴⁰ In this clause, Pennybacker obviously intended to guarantee raw materials for his planned Paoli Forge. Patton & Golliday also leased the ore banks, one of them at "Horse Springs" and the other on land which Pennybacker had purchased from a man named Lineberger.⁴¹

Patton appears to have encountered financial troubles while he was ironmaster at Redwell, and eventually fell behind in rent to Pennybacker. Though the latter evidently was a patient man, he was finally forced to have Patton's slaves attached and put up for public auction.⁴² As the time for the termination of Patton's lease grew near, Pennybacker, fearing that he would not collect his rent, persuaded the furnace workers to resign. This left Patton without colliers, but with the furnace in blast, and in order to finish out the charge the furnace had to be fueled with raw wood⁴³ in order to prevent a "salamander" or slug of solidified metal from forming in the hearth and crucible. That would have necessitated an expensive rebuilding of the interior of the furnace.

After Patton ceased operations at the furnace, he brought suit against Pennybacker for the additions and improvements he had made on the Works. The suit was not resolved until after Pennybacker's death, and the decision went against Patton, who was ordered by the court to pay Pennybacker's estate £267:13:2, along with nearly £66 in interest.⁴⁴ Patton later opened an ordinary in Staunton, where he apparently remained until 1812.⁴⁵ By 1820 he was living in Rockingham County, in a poverty-stricken state.⁴⁶

When Patton's lease expired in 1800, Pennybacker's son, Benjamin, along with his associate, George Mayberry, leased the Works as the firm of George Mayberry & Co.⁴⁷ Mayberry moved to the furnace site,⁴⁸ while Benjamin moved to a new dwelling near Pine Forge.⁴⁹ Redwell was operated by George Mayberry & Co. until 1808,⁵⁰ when it was sold to Benjamin Blackford and John Arthur in April of that year. The new owners, operating under the name of Blackford & Arthur, evidently changed the name of the furnace to Isabella.⁵¹ In November, 1808, the new partners, along with John Graham and Joseph Arthur, purchased Paoli Forge (by then called Union Forge) from the Pennybacker family for £4,500 cash and 244 tons, 15 CWT of pig iron. The inventory of the forge was also purchased for slightly over £835.⁵² Shortly after this, the new consortium constructed Union Furnace,⁵³ later to be called Columbia Furnace, near the old Paoli Forge site.



Figure 8. A six-plate stove bearing the front-plate inscription "D. PENNEBACKER HIS REDWIL FURNACE SEPTE 21 1787," dimensions unavailable. From the collection of the Mercer Museum of the Bucks County Historical Society.

Benjamin Blackford evidently remained the principal owner of Redwell, or Isabella as it was renamed, until past 1840. Earlier, he had leased part of the Catoctin Furnace operation near Thurmont, Maryland, which he worked until 1812. As a matter of possible confusion to students of southern cast iron, Blackford evidently also called his Maryland works "Isabella Furnace."⁵⁴ During the period in which Blackford was still operating in Maryland, 1808-1812, it appears likely that John Arthur was the ironmaster at Isabella in Virginia.

As noted before, pig iron was one of the most important products of the Redwell works. Bar iron, made from raw pigs, was even more important, and constituted a medium of exchange⁵⁵ during the period, just as tobacco did in the Tidewater. Pigs (Fig. 5), which usually weighed approximately 50 pounds each,⁵⁶ were sent to the forge for conversion to wrought iron. Heated nearly to the point of flow in the large "finery" forge, the pigs were reduced to a pasty mass known as a "bloom," which was drawn out under a huge water-powered triphammer. At Union Forge, this hammer

weighed 517 pounds,⁵⁷ and it struck an anvil weighing over 1000 pounds.⁵⁸ Both the hammer and the anvil were castings, and at Union Forge the latter sat upon a large white oak block that had required some 85 board feet of timber to construct.⁵⁹ Under the immense weight of the hammer, the bloom was drawn out at white heat by the hammersmith and his assistant;⁶⁰ the process drove off much of the carbon contained in the brittle pigs, refining the metal and providing malleability. The resulting "ancony," or large bar with a square "mocket" or head at each end, was trimmed and sent to the rolling and slitting mill on the site for cutting into standard-dimension nail rod and bar stock. Not all bar stock was deemed acceptable by its eventual purchasers due to possible unfavorable working characteristics, and the Paoli Forge books record that merchants frequently returned bar iron that was found to be unsatisfactory.⁶¹



Figure 9. A fragment of a front plate from a stove like that in Fig. 8. From the collection of the Mercer Museum of the Bucks County Historical Society.

Steel was also produced at the Ironworks.⁶² "Blister" steel, a form of cementation steel produced by carburizing bar stock at high red heat in charcoal, occurred regularly on the books of Pine Forge. Steel, of course, was considerably more expensive than wrought iron, though it was a necessary product where any cutting edge or hardened surface was required.



Figure 10. A rear plate from a stove like that in Fig. 8, bearing the signature of patternmaker Jacob Kiblinger. Mercer, who illustrates this example as no. 324 in *The Bible In Iron*, did not realize that this plate was from a Pennybacker stove. From the collection of the Mercer Museum of the Bucks County Historical Society.

Pine Forge remained under Pennybacker control through most of the first quarter of the nineteenth century. At the end of the eighteenth century, Pine Forge was operated by Isaac Samuels, George Mayberry, and Benjamin Pennybacker; Samuels sold his share to Mayberry and Pennybacker in 1799,⁶³ and the Forge was operated as George Mayberry & Co. for the succeeding decade. Mayberry sold out to Benjamin Pennybacker in 1810,⁶⁴ and Pennybacker's will of 1816 left the property to his sons George and Nathan. The will further specified that the "forge on Smith Creek . . . with the land and buildings . . . be sold at public sale" after Benjamin's son Samuel reached the age of 21.⁶⁵

The economics of an iron works were exceedingly complex. Balancing production and the costs of production, including thorny problems such as skilled labor, with sales in the marketplace was not a matter for those not prepared to deal with high finance. The eighteenth century merchant furnace, with its ancillary operations, represented one of the largest types of industrial trade in the early period. Because of that, it is important to understand a little of how the Redwell Ironworks operated on a day-to-day basis.

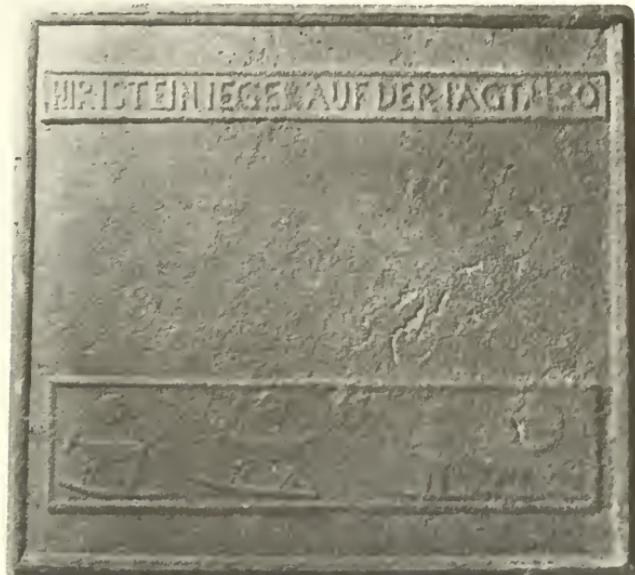


Figure 11. A side plate from a stove like that in Fig. 8, WOA 28", HOA 25 3/4". Private collection. MESDA Research File (MRF) S-10790.

As we have seen, Richard Patton leased Redwell Furnace from Derick Pennybacker for eighty tons of pig iron per annum. Since Pennybacker offered Patton a cash value of £10 per ton for pig,⁶⁶ we may assume from this that Patton's rent was £800 per year, or, according to exchange rates at the time, \$2,666.60. The various forge books, however, indicate that the average price charged for pig iron was £8; castings sold for 4 pence per pound, or from £18 to £23 per ton, and neither price included drayage.⁶⁷ It seems possible that Redwell could have run as much as three tons of metal a day, which would have generated an annual gross income of £3,300, depending upon the percentage of metal run in the form of castings. Wrought iron was sold at prices ranging from £30 to £40 per ton, depending upon to whom it was sold.⁶⁸



Figure 12. A side plate from a five-plate, jamb, or "wall stove" as it was called in Redwell accounts, due to the fact that the open back of the stove was plastered into an opening in a wall which was pierced through to the jamb or inside face of a fireplace in a room opposite. This plate is attributed to the Redwell works by the author. WOA 26", HOA 25½". Private collection. Photograph by the author.

The 1820 Census of Manufactures reported very thoroughly on "A Blast Furnace called Isabella on Hawksbill Creek," indicating that by that time the production of castings exceeded that of pigs. The furnace was using 2700 tons of ore, 216,000 bushels of charcoal, and 140 tons of limestone each year, at an annual cost of \$12,600, and employed 92 men, 45 women, and 25 boys and girls, the annual wages running \$11,000 at the time. The report mentioned that two bellows were used "for blowing the furnace," and that "The establishment as to its buildings & conveniences is not inferior to any in the United States and will make the present year about 300 Tons of Castings of different kinds & about 250 Tons Pig Metal. The same Furnace is capable of Making 400 tons of Casting & 350 Tons of Pig Metal if the demand for articles would justify extending the business." The Census further remarked that sales were "very dull" at Isabella at the time; castings were being sold for \$80 per ton, and pig iron for \$30. Some \$90,000 of capital had been invested, and the works had an annual overhead of \$15,000 above the cost of labor.⁶⁹

All of Redwell's ore was obtained from Pennybacker's two ore banks mentioned earlier. Though the precise locations of these banks have not been identified, Fig. 3 indicates the general area; these were shown near Pass Run in an 1885 atlas of Page and Shenandoah Counties published by D. J. Lake & Co. The Iron-works papers indicate that Pennybacker used both Pass Run and Hawksbill Creek as ore washes. The ore was strip-mined, and the miners were paid £55 for a six months' supply of ore washed and prepared for use at the furnace.⁷⁰ Washing entailed transporting the raw material by wagon to Pass Run or Hawksbill Creek, and dumping it in the stream so that loose soil was washed away. Drivers then transported the ore to the furnace site, where it was probably "calcined" or roasted to further refine it before undergoing smelting in the furnace. The teamsters were salaried workers paid 60 shillings per month; they were also paid on a daily pro-rated basis.⁷¹ At Redwell, a four-horse wagon team cost approximately £120.⁷² If hauling was contracted out, the Ironworks paid 2s. per ton per mile for a distance under twenty miles, or 1s. per ton for distances over that.⁷³ When the Ironworks teams and drivers weren't employed with work for the company, they were often leased to the public for general hauling.⁷⁴



Figure 13. A side plate from a small jamb stove attributed to the Redwell works by the author, WOA 23", HOA 21". Private collection. Photograph by the author.

Fuel sufficient to supply the greedy demand of the furnace was another matter which required constant attention. Pennybacker's land holdings were modest in comparison with those of other fur-

nace owners, and he was obliged to deal with surrounding land owners for cordwood. Redwell either contracted to cut wood on private land, or contracted with farmers⁷⁵ to supply cordwood themselves, in which case the Works loaned the wood contractor an axe which was credited against his account.⁷⁶ The Works commonly paid £0:2:6 per cord for wood delivered at the coaling grounds.

Hardwood was converted to charcoal by a process of burning it very slowly in a circular, mounded pile covered by damp earth, carefully vented to prevent the wood from bursting into flame. Constructing a charcoal kiln was indicated as "laying out hearths" in the Ironworks books. In one instance, Francis Pummile, a collier at Union Forge, was paid £1:16:10 for "laying out hearths, setting pitts and covering,"⁷⁷ though the Works occasionally paid more if the coal house was running empty.⁷⁸ The Works also purchased charcoal from local farmers; John Wayland, in his *German Element of the Shenandoah Valley*, reported having seen large, circular blackened areas in freshly-ploughed fields in the area. Some of these features were forty feet or more in diameter, the size of a normal charcoal kiln.⁷⁹ Five days' burning was normally required to produce charcoal, and the colliers were paid 3s. per day for the work.



Figure 14. A side plate from a Redwell six-plate stove by Richard Patton, dated 1797, and bearing the legend "THE QUEEN OF THE TORTOISES," "W'OA 26", HOA 19½". Private collection. MRF S-10716.

Although colliers customarily built their own shelters on the coaling grounds, particularly since coaling required 24-hour supervision, many of the workers at the furnace itself were provided with housing.⁸⁰ The Ironworks also provided workers with blankets and bedding.⁸¹



Figure 15. Side view of a six-plate stove run at the Redwell works for Derick Pennybacker while the furnace was under lease to Richard Patton. The overall dimensions of the stove body are: DOA 16", WOA 27", HOA 33½". Courtesy Mauck's Meeting House. Photograph by the author.

A good deal of the labor employed by the Ironworks was slaves or freed blacks, both, in most instances, performing work where skilled tradesmen were not required. Pennybacker employed more than a dozen slaves at the Works, and Richard Patton half that number.⁸² Patton listed the duties of some of the blacks, including the jobs of barksman, who was required to debark cordwood, and carter, who had the fiery job of charging the furnace. One of Patton's blacks was a gutterman, with the responsibility of preparing the castings floor for a run.⁸³ These particular workers may have been freed blacks, since Patton recorded a wage for them close to the amount paid white workers.⁸⁹ Slaves were also rented upon occasion; in 1811 Pine Forge hired the services of a black worker for £16 per year.⁸⁵



Figure 16. Front view of the stove illustrated in Fig. 15. Courtesy Mauck's Meeting House. Photograph by the author.

The gross annual income for Pine Forge was very similar to that of the furnace itself. In 1797, Pine Forge made over 101 tons of bar iron, the material selling for over £3,805; in 1798, 107 tons at a value of £3,835 were produced, indicating an average selling price of nearly £37 per ton for bar stock.⁸⁶ The wholesale price of bar iron was actually set by the forge workmen, who established the value in relation to their daily wages, agreeing upon a figure of 3½ pence per pound or £29 per ton.⁸⁷ Workers were allowed to take their wages in bar iron at this price, and they commonly sold or bartered it at the going rate of 4½-5 pence per pound. Pine Forge's most expensive product, blister steel, sold for £0:1:3 per pound.⁸⁸ Much less expensive than either steel, bar iron, or dimensioned stock were anconies, which were sold to other forges rather than merchants, going for £25 per ton.⁸⁹ One of the best-paid



Figure 17. One pattern of stove base used at Redwell for large six and ten-plate stoves. Private collection. Photograph by the author.

workmen at Pine Forge was the hammersmith, who was paid at a rate of 100s. per month, or £2 per ton. In contrast, the Forge blacksmith made 66s. per month, and the Forge teamster 60s.⁹⁰

Although the products of the Redwell Ironworks were numerous and varied, there is little evidence that the forges operated under the Ironworks umbrella produced anything other than wrought iron bar stock, steel, and tools. Redwell Furnace, however, produced an interesting inventory rather similar to other Valley furnaces. In addition to pigs, Redwell ran pots in various capacities ranging from one to ten gallons, kettles in sizes from 10 to 60 gallons, both large and small dutch ovens, large and small "bake plates," dinner plates, skillets with lids, andirons, window and clock weights, both large and small jamb or "wall stoves," large and small six-plate stoves, seven-plate stoves, ten-plate stoves, and grave markers. The furnace also ran various components such as bearings and the like for use at the forges, including forge "bottom plates," "tub plates" for both the finery and chafery operations at the forge, gudgeons, "Shammy plates," "Karns," hammers, and anvils. All of these items occur in the various Ironworks account books, particularly the Redwell books for 1796-1800.⁹¹ The 1820 Census of Manufactures also listed various articles of production at Isabella. In addition to "Pots, Ovens, Scillets, And Irons," the Census mentioned "Tea Kettles, large Kettles, Plaster Machines, Mill Machinery of all description,



Figure 18. The sideplate for a Mayberry & Pennybacker six-plate stove, WOA 32 $\frac{1}{8}$ ", HOA 26 $\frac{1}{8}$ ". MESDA accession 2024-138.

Fortunately, a number of cast forms exist that either were signed by or may be attributed to Redwell (and Isabella). The most humble of these, though surviving as an example of the furnaces' greatest source of income, is a 15 lb. fragment of a pig shown in Fig. 5; it was excavated on the furnace site.

The andirons in Fig. 6 have a long history of use in one of the houses at the furnace site⁹³ thought to have been Derick Pennybacker's residence. Though many references to "fire dogs" and andirons may be found in the Ironworks books, no dated or marked ones are known to exist. This particular pair may be placed in a stylistic range of 1785-1820, or possibly later. The overall form and particularly the cabriole base with a peak under the upright is stylistically associated with a number of other andirons found in the Valley, indicating the popularization of the form.

Also excavated on the furnace site was the small, one-gallon pot in Fig. 7. Pots of this size were sold at Redwell for prices ranging from four to seven pence.

Stoves of various types obviously represented a very significant production at Redwell. Mentioned earlier was the 1787 six-plate stove (Fig. 8) that is the earliest datable specimen of Redwell iron. The sideplates of this stove (Fig. 11) depict a hunter with his rifle and dogs pursuing a pair of bucks, and a German inscription on



Figure 19. A fragment of a side plate from a six-plate stove by Blackford & Arthur, utilizing the same pattern as the plate illustrated in Fig. 18, HOA 27½". Private collection. Photograph by the author.

the plate verifies the subject: "Hir is ein Jeger (Jäger) auf der Jagt also" or "Here is a hunter on the hunt." Strengthening the Germanic statement made by this scene are four pinwheels that also adorn the plate.

The jamb stove side plate illustrated in Fig. 12 may also represent early production at Redwell, and may answer the numerous entries for "large wall stoves" in the Ironworks books. A number of these plates have been found in the vicinity of Redwell Furnace, and the large pinwheels used for decoration draw a certain comparison with the "hunter" stove of Fig. 11, though such devices are common to areas heavily settled by Germans. The location of a front plate from this stove will likely provide a firm identification.

Also found in the Redwell area, along with others of the same pattern, was the small jamb stove plate illustrated in Fig. 13. Though admittedly more sophisticated than the stoves described above, Redwell did produce "small wall stoves,"⁹⁴ according to the books, and it is possible that this fine pattern was indeed part of the furnace production. Mercer illustrates an example of this pattern in *Bible in Iron* (Fig. 136 in Mercer), and points out the ingeniousness of the rabbit design. While each appears to have two ears, there are actually only three between them.

When Richard Patton, with the assistance of his eldest son, William,⁹⁵ took over Redwell Furnace in 1796, he wasted little time in developing his own casting patterns. The side plate of a six-plate stove illustrated in Fig. 14 bears the inscription "R. PATTON" and "1797." Though a plate of this pattern had been attributed by Mercer to William Patton of Center County, Pennsylvania, it is almost certainly a plate from the "small six plate stove" recorded in the Redwell books for 1797-1800. This particular example represents the classic use of one of Aesop's fables, identified in the lower inscription as "The Queen of the Tortoises." In this fable, as Mercer relates the tale, two geese offer to carry a tortoise by having her bite a stick borne by the two birds, but the geese caution the tortoise to keep her mouth shut during flight. In the course of the journey, other birds gather to taunt the tortoise, and wanting to make a rebuttal, the tortoise opens her mouth and falls to the ground. The head of one of her tormentors may be seen at the right side of the plate.



Figure 20. The side plate of a small Blackford & Arthur six-plate stove from the Isabella works, WOA 26", HOA 19". Private collection. Photograph by the author.

Numerous plates of this pattern have been found in Shenandoah County and other surrounding Virginia counties. Some of the plates, identical in both decoration and date, bear the name "W. Patton" for Richard Patton's son, William, who could not have been more than sixteen years old in 1797,⁹⁶ which is unusual. One of these "W. Patton" plates, in fact, had caused the former Pennsylvania attribution. This plate bears a close stylistic resemblance to other Redwell castings (Fig. 15ff), suggesting that the same carver may have executed this pattern for the Pattons.

A particularly fine six-plate stove bearing the name of Derick Pennybacker and the date 1799 (Fig. 15) was run at Redwell during Patton's proprietorship, perhaps as a contract job for Pennybacker. It is known that Pennybacker delivered ore to be run through the furnace on occasion.⁹⁷ This stove has a history of use in Manck Meeting House, formerly Mill Creek Church, which was built ca. 1799; the stove may have been in use there soon after the construction of the church. The side plates of this stove also bear the initials "AB," possibly those of Andrew Bear, who will be discussed later. The pattern for the side plates of this stove was adaptable for use as a ten-plate stove as well; in running the side plates for a ten-plate stove, a section of the pattern located between the two parallel, raised beads (Fig. 15) could be removed to provide a cast opening for a door. The base on this stove (Figs. 16, 17) is a typical Redwell pattern for a stove base. Only the end irons were cast, the furnace blacksmith furnishing the wrought-iron center stretcher and braces, all of which pierced the end castings and were upset or peened over on the tenon ends to fasten the base together.

Another pattern signed "AB," carved in a format almost identical to the stove in Fig. 15, is the side plate for a six-plate stove run at Redwell under the proprietorship of George Mayberry and Benjamin Pennybacker (Fig. 18). Only the urn at center bottom and a few small details are markedly different from the 1799 stove, though on this example the carver added a pleasant late Rococo double C-scroll design to the blank area where a door would have been located if the stove had been run as a ten-plate. Though this particular example is dated 1805, the author has recorded identical plates dated 1801 and 1804, indicating that the dates were changed annually on this pattern. While this occurs in the work of other furnaces, such "updating" of patterns was not necessarily a common practice at every furnace.

The same pattern was used by the firm of Blackford and Arthur after they purchased Redwell in 1808. The firm's name was simply substituted for that of Mayberry and Pennybacker, as we see in the plate fragment illustrated in Fig. 19, though a matter of interest is the fact that the patternmaker's initials were removed from the pattern. Another six-plate stove casting from Blackford and Arthur's newly-renamed Isabella Furnace, however, shows the same hand in the carving, and may represent an additional pattern formerly used by Mayberry and Pennybacker (Fig. 20).

A number of ten-plate stoves and fragments thereof have been found that have histories of Page County ownership in the vicinity

of the furnace. At least two patterns of such stoves have been recorded, and both bear the legend "ISABELLA FURNACE" (Figs. 21, 23). Though it has been assumed that these stoves were run by the Blackford and Arthur firm at Isabella Furnace, it should be recalled that Blackford had remained in Maryland between 1802 and 1812, where he had leased part, if not all, of the large Catoctin Ironworks. Though considerable confusion appears to exist in published histories of Catoctin, at least in regard to secondary names given that furnace or ancillary works, it seems that



Figure 21. A ten-plate stove from Isabella Furnace, possibly the former Catoctin works in Maryland. The naval engagement scene bears the legend "WE HAVE MET THE ENEMY AND THEY ARE OURS." The dimensions of the stove body are: DOA 15½", WOA including ash pan 37½", HOA 24½", HOA including the base 37". MESDA accession 2498.



Figure 22. A mantel in the Baltimore Drawing Room, Winterthur, utilizing a Robert Wellford composition appliquè virtually identical to that on the Isabella stove illustrated in Fig. 21. The scene depicts Perry's victory over the British in the Battle of Lake Erie. Courtesy The Henry Francis du Pont Winterthur Museum.

Blackford (or another ironmaster) may have named one of the furnaces at Catoctin "Isabella." To further fuel blazing confusion, in 1806 the firm of Brien and McPherson had purchased Antietam Furnace on the Potomac River in Maryland, and evidently renamed that operation "Isabella Furnace." Brien and McPherson later (1820) purchased Catoctin as well.⁹⁸ One such Isabella Furnace

stove attributed to Virginia bears the signature of the pattern carver, John McDowell, on the back plate; this man's work and further speculation upon the troublesome Isabella stoves, will be discussed later.

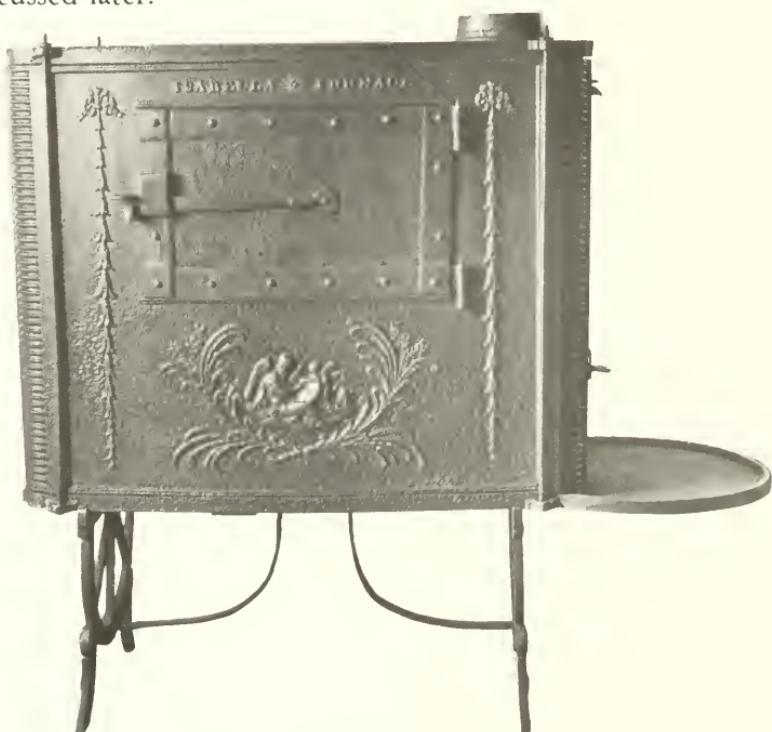


Figure 23. A second pattern of Isabella ten-plate stove, also cast from patterns decorated with composition work of the Wellford type. A stove evidently using identical patterns was run at Ege's Pine Grove Furnace in Pennsylvania. The dimensions of the stove body are: DOA 17 $\frac{1}{4}$ ", WOA including ash pan 43 $\frac{1}{2}$ ", HOA with base 38". Private collection. MRF S-11048.



Figure 24. The back plate of the stove illustrated in Fig. 23, showing the signature of the patternmaker, John McDowell. MRF S-11048.

Certainly far more clear in regard to provenance are the many cast iron grave markers found in local cemeteries in the area around Redwell. One such marker (Fig. 25) was done for Jacob Shealer, Jr., who was presumably the son of Jacob Shealer, a furnace worker at Isabella. After Shealer's death in 1825, an obituary in the *Shenandoah Herald* erroneously stated that Shealer "had founded" Isabella Furnace.⁹⁹ Shealer's actual position at the furnace is not known, though many of the furnace workers were indeed provided with iron markers just as the younger Shealer was. A cemetery less than a half-mile from the furnace site is filled with them. Another form of marker run at the furnace was somewhat more attenuated (Fig. 26), fitted with a small spade-like foot which was inserted into the ground.

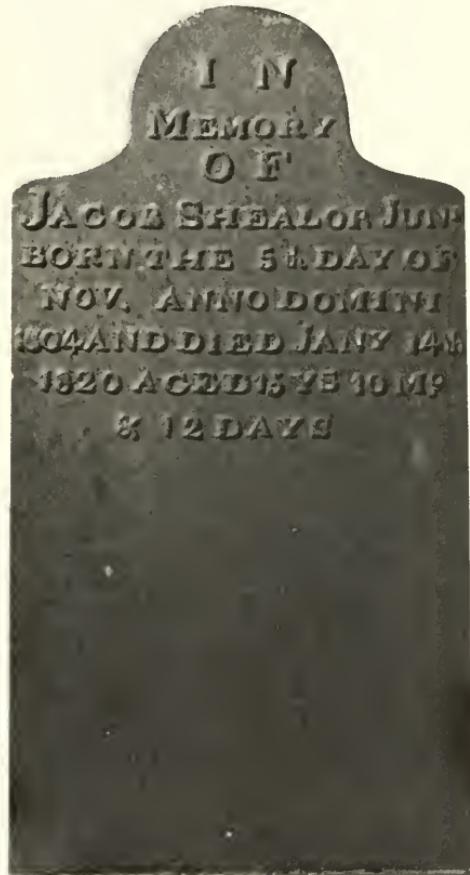


Figure 25. The grave marker of Jacob Shealer, Jr., from a cemetery near the Redwell Furnace site, WOA 11½", HOA 22¾". Private collection. MRF S-10784.



Figure 26. The grave marker of John Glenn, Senr., from a cemetery near the Redwell Furnace site, dimensions unavailable. Private collection. Photograph by the author.

The attribution of cast iron to a specific furnace, even in some cases where it is plainly marked, can be difficult, as we have seen. As an attempt to assist such attributions, a project was undertaken by the author where various articles of Shenandoah Valley cast iron objects were subjected to analysis in order to determine something about the nature of the metal run at various furnaces. Samples in the form of filings were taken from fifty-three cast articles, for the most part either signed by or attributed to Valley furnaces, and a spectrographic analysis of these samples was provided by the Union Carbide Corporation. An examination of the results of these tests cannot be taken as totally conclusive evidence proving attributions which have been made to various furnaces, but the tests do indicate a startling uniformity among castings specifically associated with the Redwell works.

The major elements comprising Shenandoah iron are, of course, iron and silica. Of lesser concentration in the metal is manganese, aluminum, nickel, and titanium; common trace elements are copper, nickel, chromium, and titanium. These elements occur in varying amounts in iron ores, and each ore bank is more than likely characterized by a specific combination of elements which would also occur in castings made from that particular ore bank. Seventeen objects made by or attributed to the Redwell/Isabella works were sampled, including the pig (Fig. 5), pair of andirons (Fig. 6), "rabbit" stove plate (Fig. 13), Patton stove plate (Fig. 14), Blackford & Arthur plate fragment (Fig. 19), and both of the grave markers illustrated here, as well as a marker still in the furnace graveyard. Also tested were pieces of scrap iron from the furnace, a Mayberry and Pennybacker stove plate, a second Blackford & Arthur plate, a second Patton plate, a plate from a 1787 Derick Pennybacker stove, and a plate from an Isabella stove. Except for a piece of scrap iron, all of the samples indicated an absence of nickel in minor amounts. Trace amounts of nickel were recorded for one of the Patton plates, the "rabbit" plate, the Shealer marker, the Derick Pennybacker plate, the andirons, and the Isabella plate. The piece of scrap also indicated trace amounts of nickel, but it is possible that particular sample may have been salvage brought from another site. As we have seen, the works did purchase scrap iron.

For comparison, twelve cast objects from other furnaces were sampled, including three stove plates from Isaac Zane's Marlboro Furnace in Frederick County, along with three andirons attributed to that works by the author. Also sampled were three stove plates by unknown makers, a stove plate from Stiegel's Elisabeth Furnace in Pennsylvania, a plate from Mount Aetna Furnace in Maryland, and a trivet by an unknown maker. All of these castings indicated the presence of nickel in both minor and trace amounts, a marked contrast with products associated with Redwell/Isabella Furnace, which have only trace amounts of nickel, or none at all. Though a greater variety and number of samples is obviously needed in order to draw definitive conclusions about the exact nature of metal run at various furnaces, such spectrographic analysis shows promise as a means of making attributions where no other hard evidence exists. Attribution by these means, of course, depends upon the objects from a particular furnace having a distinctive composition, just as castings from Redwell appear to have.

Among American cast iron objects, both firebacks and stove plates are generally the furnace products exhibiting the greatest degree of decorative value. The work of the Shenandoah Valley furnaces is no exception to this,¹⁰⁰ and in such castings we expect to find a broad range of artistic quality ranging from primitive and rudimentary to sophisticated and even academic styles derived from published design sources. Though the Redwell works produced no firebacks that have been recorded, stove plates from that works provide an interesting comment upon the varying skill of the pattern carvers employed by the Works. The work of two and perhaps three carvers is associated with castings from the furnace.

The earliest carver associated with the Redwell works was an artisan by the name of Jacob Kiblinger, who carved the patterns for Derick Pennybacker's 1787 "hunting" stove. Though almost nothing is known of Kiblinger other than the fact that he was evidently a resident of Shenandoah County,¹⁰¹ he did sign the back plate of Pennybacker's first stove quite proudly, if in a slightly illiterate style "ICH HAB DIE FORM GEMACH JACOB KIBLINGER 1787" (Fig. 10). This statement, "I have made the pattern," is a rare occurrence on American iron, for most casting pattern carvers have not been identified.

Redwell's major carver was the artisan who thoughtfully signed each of his stove side plates with the initials "AB". These initials may well be those of Andrew Bear (also Baer, Bare), who, according to Bear family records, emigrated to Shenandoah County from the area of Lancaster, Pennsylvania and settled at Plains Mill near New Market. Andrew Bear (1759-1841) was supposedly the father of Christian Bear (1783-1847), who was evidently trained in the cabinetmaking trade, and who worked in the Churchville area of Augusta County, Virginia.¹⁰² It appears likely that Andrew was also a cabinetmaker, and a significant group of furniture in the federal style is associated with one or both of these men, along with several examples of architectural carving.

An individual who may have been Andrew Bear is identified in the Pine Forge account book for 25 April, 1801, when "Derik (sic) Pennybacker" was charged £0:16:6 for 44 lbs. of bar iron which he had evidently given "Bare the stove pattern Maker."¹⁰³ This entry suggests that "Bare" was paid in bar stock for unspecified work, which was normal practice, as we have seen. Plains Mill, where Bear supposedly lived, was only about 10-14 miles from Smiths Creek.



Figure 27. A side plate from a six-plate stove run by William and Samuel Moore at Nancy Furnace, WOA 32½", HOA 26¼". The same patternmaker, who signed his work "AB", made patterns for the Redwell works. Private collection. MRF S-7551.

"AB", or presumably Andrew Bear, also carved patterns for other furnaces. Figs. 27 and 28 illustrate stove plates from Samuel Moore's Nancy Furnace in Rockingham County, Virginia. It is interesting to observe here that two separate patterns had been carved for running both six and ten-plate stoves, even though both were the same size. This is somewhat in contrast with the convertible patterns used at Redwell. Another six-plate stove plate (Fig. 29) which may be associated with Mossey Creek Furnace also shows the same carver's hand. Though the carved figure of a stork clutching a ball is better executed than the one used on the front plate of Pennybacker's 1799 stove (Fig. 16), the motif is certainly the same. Hopefully, research currently underway will provide us with more information concerning Andrew Bear, and allow us to understand just what the extent of his association with the Redwell works was.

A third carver that may have done work for the Isabella phase of the Redwell Ironworks signed the rear plate of a ten-plate stove (Fig. 24) "JOHN McDOWELL FECIT." This carver may have been the same artisan listed by two 1801-1803 city directories as having a shop in Fell's Point in Baltimore. However, the Baltimore McDowell was listed not as a carver, but as a turner.¹⁰⁴ Perhaps the same man, or at least another turner by the same name had advertised in Charleston, S.C. in 1797 that he carried on "The Turning Business . . . either in Wood, Iron or Brass."¹⁰⁵ The same name again occurs in Philadelphia, where "John M'Dowell, turner" was

listed at 44 Sassafras St. in a city directory for 1810,¹⁰⁶ and in several subsequent directories there. While it is not known whether John McDowell, turner, was the same man that executed the stove patterns, the patterns for two Isabella stoves definitely have a Philadelphia association. Robert Wellford of Philadelphia listed his "original American composition ornament manufactory" at several Philadelphia addresses between 1810 and 1820.¹⁰⁷ Though his work was primarily intended as architectural appliqués for interiors, his composition ornaments were particularly suitable for use on stove patterns as well, since the designs had no undercuts. All of the ornament on the patterns used in casting both Isabella stoves illustrated here apparently was composition work provided by Wellford's firm; the scene on one stove depicting the Battle of Lake Erie (Fig. 21), in fact, has been found as central ornaments on several Federal period mantels. Two Baltimore interiors which have virtually the identical scene adorning mantels (Fig. 22) are installed at Winterthur. A Wellford broadside in the Stauffer Collection of the Historical Society of Pennsylvania advises that composition was a "... cheap substitute for wood carving . . . It is a cement of solid and tenacious materials, which, when properly incorporated and pressed into moulds, receives a fine relief." There is hardly any question that a set of stove plate molds could be made up quickly from such ornament.



Figure 28. A side plate from a ten-plate stove by William and Samuel Moore, also inscribed "NANCY FURNACE," "WOA 32 1/2", "HOA 26 3/8". Private collection. MRF S-10804.

Composition ornament used as decoration on stove patterns was common in western Maryland, evident from castings both

from Antietam Furnace and Catoctin as well. In fact, McDowell may have made patterns for a stove run by Pine Forge Furnace¹⁰⁸ in Pennsylvania, the ornament duplicating that used on the Isabella stove in Fig. 23. However, using such means to fabricate patterns appears to be foreign to Shenandoah Valley work before 1820. Despite the fact that the spectrographic analysis of an Isabella plate showed a metal composition allied with that of regular production from the Redwell/Isabella works, and despite the fact that existing stoves have Virginia and even Page County histories, it appears most likely that the stoves were actually run at one of the Isabella furnaces in Maryland, probably by the former Catoctin works. It seems reasonable to assume that Benjamin Blackford maintained business liaisons with Maryland after his lease of Catoctin expired in 1812, and he may have purchased stoves from there to sell at his own Isabella furnace in Virginia. Flask-cast stoves with curved plates, such as those on the Isabella stoves illustrated, were technically more difficult to produce than the thicker, flat plates Valley furnaces customarily ran. It may be that the novelty of thin, curved plates provided enough financial advantage to warrant importing them from Maryland. Hopefully the exact identity of the mysterious Isabella stoves will be proven eventually.



Figure 29. A side plate from a six-plate stove, possibly from Mossey Creek Furnace, showing the work of the same patternmaker. WOA 28 $\frac{1}{8}$ ", HOA 21". Private collection. MRF 9492.

Like other Virginia ironworks, Redwell Furnace and its subsidiary operations was largely in business during its early period to provide raw materials for a growing America. The bulk of the metal run or refined at the Works eventually was converted into

everyday necessities, ranging from humble flooring nails to elegant architectural hardware. Surviving wrought iron made from Redwell pigs is no doubt spread over a broad area from Virginia to Pennsylvania, though leaving no clue to its origin in Derick Pennybacker's ore banks. Though a smaller proportion of the furnaces' production initially, castings for household use run at Redwell become doubly important since they remain as direct evidence of the industrial success of Pennybacker and those who followed him. Few early industries offer the wealth of research materials available to those who care to unravel the complex histories of southern iron-works and the interesting personalities which surrounded them.

Dr. Comstock is a Winchester dentist and collector long interested in the decorative arts of the Shenandoah Valley. He is particularly well known for his extensive ceramics research; he wrote the introduction to Folk Pottery of the Shenandoah Valley by William Wiltshire (New York: E. P. Dutton & Co., 1975).

FOOTNOTES

1. Charles E. Hatch, Jr. and Thurlow Gates Gregory, "The First American Blast Furnace, 1619-1622," *The Virginia Magazine of History and Biography*, Vol. 70, No. 3, July, 1962, pp. 259-277.
2. John Bivins, Jr., "Decorative Cast Iron on the Virginia Frontier," *Antiques*, Vol. CI, No. 3, March, 1972, pp. 535-539. A much longer unpublished manuscript treating this subject by the same author is located in the MESDA Research Files, hereinafter abbreviated *MRF*.
3. Although Derick Pennybacker's death date has been published in several sources as having been 1799, records exist that appear to refute that. P. 235 of the *Pine Forge Account Book* (Special Collections, University of Virginia Library) records a 25 April 1801 entry to Pennybacker's account, and a deposition by Isaac Gore, Bernard Peale, and John Hipp (*Chancery Court Papers*, Augusta County, Virginia) mention an event involving Pennybacker that took place "Sometime in the Spring of 1800."
4. Berks County *Tax Records* for Tulpehocken Township, 1770. Archives of the Commonwealth of Pennsylvania, Harrisburg, Pa.
5. Helen May Byrd Burnam, *Our Forefathers and Something We Know About Them* (Ashland, Oregon: privately published, 15 December 1978) p. 66.
6. Berks County *Tax Records*, op. cit., 1782-1790.
7. *Pennybacker Family Papers*, The Historical Society of Pennsylvania, Philadelphia, Pa.
8. *Ibid.*
9. Michael D. Thompson, *The Iron Industry of Western Maryland* (Morgantown, West Virginia: privately issued, 1976), pp. 52-53.
10. *Pennybacker Family Papers*, op. cit. The collection contains a letter from Derick Pennybacker to his mother, dated 1784, and written at Pine Forge.

11. John Walter Wayland, *History of Shenandoah County, Virginia* (Strasburg, Virginia: Shenandoah Publishing House, 1927).
12. Augusta County, Va. *Deed Book 22*, p. 244.
13. Shenandoah County, Va. *Deed Book F*, p. 90.
14. *Paoli Forge Account Book*, privately owned, copy in MRF.
15. *Ibid.*, 1 April 1808.
16. Patton and Golliday's lease of Redwell Furnace from Derick Pennybacker, 5 February 1796, private collection, copy in MRF. Part of the text reads ". . . if in case the said Pennybacker should build a Forge they the said Patton and Golliday agree to furnish him with twenty tons of pigs in addition to the eighty tons afore mentioned."
17. Augusta County, Va. *Chancery Court Papers* (hereinafter cited as CCP), instrument filed by John T. Brooke on behalf of Derick Pennybacker, John Jordon, and Richard Patton concerning an illegal bond obtained by Samuel Ferguson from Pennybacker, Jordon & Co.
18. Berks County *Tax Records*, op. cit., 1785.
19. *Redwell Account Book*, Patton and Golliday, privately owned, copy in MRF. This book contains a transaction summary of all the business dealings between Derick Pennybacker and Patton, Golliday & Co.
20. Augusta County CCP, and amendment to the suit of Patton vs. Pennybacker, 25 July 1803, describing "A new bridge from the bank to the bridge house." There is also physical evidence of this at the furnace site.
21. *Redwell Account Book*, MRF.
22. *Ibid.*
23. Based upon physical inspection of the Redwell Furnace site by the author.
24. By a physical inspection of the Furnace site, it was determined that the foundation of the grist mill remains. Also, Patton and Golliday's lease of Redwell, MRF.
25. *Ibid.*
26. Patton and Golliday's lease, MRF.
27. Augusta County CCP, amendment to suit of Patton vs. Pennybacker, op. cit.
28. The *Redwell Account Book*, MRF, has the entry on p. 13 "Boarding up gavil (sic) end of pot house."
29. Augusta County CCP, amendment to suit of Patton vs. Pennybacker, op. cit.
30. *Ibid.* Part of the text reads "Built one large stable . . . substantially floored and covered with $\frac{1}{2}$ inch planks, doors hung on large iron hinges."
31. *Ibid.*
32. *Pine Forge Account Book*, privately owned, copy in MRF. The volume contains a complete accounting of land holdings for tax purposes.
33. Kathleen Bruce, *Virginia Iron Manufacture in the Slave Era* (New York: The Century Co., 1931), p. 133, footnote 115.
34. *Paoli and Pine Forge Account Books*, MRF. Both sources contain many references of iron being shipped to Fredericksburg, Va.
35. Wayland, *History of Shenandoah County*, and a 23 March 1811 reference in the *Pine Forge Account Book*, MRF that reads "paid Adam Decker per order for hauling 1 ton pigs to the White House 8/4."

36. Augusta County *CCP*, deposition of Benjamin Pennybacker and George Mayberry in regard to the suit of Patton vs. Pennybacker.
37. Shenandoah County, Va. *Wills and Estates*, the executors' account of the estate of Derick Pennybacker deceased, 5 December 1809.
38. Patton and Golliday's lease, *MRF*.
39. *Ibid.*
40. *Ibid.*
41. *Ibid.*
42. Augusta County *CCP*, Patton vs. Pennybacker, deposition of Richard Patton.
43. Augusta County *CCP*, deposition of Jacob Hood 29 May 1804, which in part reads ". . . during which time the furnace was filled with wood in place of coal . . ."
44. Augusta County *CCP*, Court order of 13 June 1804.
45. Augusta County *Tax Lists*, 1800-1816.
46. Rockingham County, Va. *Deed Book 4*, filed under "Burnt record."
47. Augusta County *CCP*, deposition of Edward Abbott, 24 June 1803.
48. *Ibid.*
49. Burnam, "Our Forefathers," p. 19.
50. Shenandoah County *Wills and Estates*, estate of Derick Pennybacker, op. cit. Also, the *Union Forge Account Book*, privately owned, copy in *MRF*. An entry of 26 March 1808 debits "Mayberry and Co. 2 teams 3 days moving you to Paoli £4:10:0."
51. The *Records of the 1820 Census of Manufactures* for Shenandoah County, Va. lists "A Blast Furnace called Isabella on Hawksbill Creek."
52. *Union Forge Account Book*, *MRF*, 13 November 1808.
53. *Ibid.*, an entry of 21 April 1808 credits "Union Furnace for cash received of Benjamin Blackford" and debits "George Mayberry & Co."
54. Thompson, *Iron Industry of Western Maryland*, p. 65.
55. There are numerous transactions listed in the various forge account books where forge workers accepted bar iron in lieu of cash payments.
56. Kenneth T. Howell and Einar W. Carlson, *Men of Iron: Forbes and Adams* (Lakeville, Conn.: Pocketknife Press), p. 126.
57. *Union Forge Account Book*, *MRF*, 14 March 1808.
58. *Ibid.*
59. *Ibid.*, 7 July 1808.
60. *Pine Forge Account Book* (Special Collections, University of Virginia Library). An entry of 30 September 1799 credits "John Farmer for making [£]7:1:2 of anchories (sic) with C. Furry at 38/- per ton."
61. The *Paoli Forge Account Book*, *MRF* credits "Burke and Gray bar iron per 11 pounds returned £0:3:3" on p. 13; Burke and Gray is similarly credited on p. 20 of the same source, and in *Union Forge Account Book*, *MRF*, George Mayberry is credited for iron returned 7 July 1808.
62. *Pine Forge Account Book*, *MRF*. An entry of 3 May 1811 charges Joseph Kratzer for 13 lbs. "Blister" steel and 3 lbs. "Crawley" steel; while the nature of the latter is not known, it was charged out at 15 pence per pound in contrast to the blister at 9p, and entries for it occur more often.

63. Augusta County CCP, deposition of William Abbott, 24 June 1803.
64. *Pine Forge Account Book*, MRF, 25 March 1809.
65. Shenandoah County *Will Book I*, p. 278.
66. Augusta County CCP, deposition of William Steinberger, 11 June 1803.
67. *Ibid.*, deposition of Richard Parton, 25 July 1803; also, *Ibid.*, deposition of William Blackmore, 26 October 1803, where it was stated that the retail price of castings at the furnace was "four pence per pound."
68. *Pine Forge Account Book* (Special Collections, University of Virginia Library). An entry for 15 February 1800 charged Joshua Fultz £33:9:9 for bar iron, as one example of such a transaction.
69. *Records of the 1820 Census of Manufactures* for Shenandoah County, Va.
70. Augusta County CCP, deposition of John Skelton (undated).
71. *Union Forge Account Book*, MRF. One such instance was a credit to "Adam Little for 26 days driving team at 60/ . . . £3:0:0."
72. *Pine Forge Account Book* (Special Collections, University of Virginia Library), 11 March 1800.
73. *Union Forge Account Book*, MRF. An entry for 28 April 1808 lists "hauling 1 ton piggs from furnace £1:15:7," a distance less than 20 miles. In *Ibid.*, 21 May 1808, a similar entry lists hauling 1 ton, 10 CWT of bar iron to Winchester (over 48 miles) at £3:12:0.
74. *Paoli Forge Account Book*, MRF. A 22 March 1808 entry in the profit and loss column lists ". . . hauling stone for Sanford £1:16:2."
75. *Union Forge Account Book*, MRF. One entry credits "Michael Brumback for 54 loads of coal at 13/ per load £35:2:0."
76. *Ibid.* An entry for 20 August 1808 debits 4/6 to "Francis Pummile for one old axe lent."
77. *Ibid.*, 21 April 1808.
78. *Ibid.* An entry for 27 September 1808 credits ". . . Pummile for coaling 96 cords of wood at 2 7 1/2 . . . £12:12:0."
79. John Walter Wayland, *The German Element of the Shenandoah Valley of Virginia* (Harrisonburg, Va.: C. J. Carrier Co., 1978), p. 204.
80. Augusta County CCP, deposition of Jacob Hood, 29 May 1804.
81. *Paoli Forge Account Book*, MRF. An entry for 14 March 1808 credits John Astwood for "12 1/2 days driving team 28/9" and also for returning "1 blanket 24/" for a total of £2:12:9.
82. *Pine Forge Account Book*, MRF. The inside cover of this source carries a listing of personal property for tax purposes, the entries including 14 slaves. Also, Augusta County CCP, in a 11 June 1803 deposition by Davis Allen, Allen said that "he levy'd his warrent (sic) on seven negroes" which were slaves belonging to Richard Patton.
83. *Redwell Account Book*, MRF, 13 April 1799.
84. *Ibid.*
85. *Pine Forge Account Book*, MRF. An entry for 12 January 1811 credits "Ann Steward for the hire of one negro man Bartley the present year £16:0:0."
86. Augusta County CCP, deposition of William Abbott, 24 June 1803.
87. *Ibid.*

88. *Union Forge Account Book*, MRF, 14 May 1808.
89. *Paoli Forge Account Book*, MRF, 21 March 1808.
90. *Union Forge Account Book*, MRF, 30 April 1808.
91. The various account books pertaining to the Ironworks have vast numbers of entries pertaining to these products; space prohibits further examination here.
92. *Records of the 1820 Census of Manufactures* for Shenandoah County, Va.
93. The provenance of the andirons was supplied by their owner.
94. *Redwell Furnace Account Book*, MRF. Under the heading of "Wall stoves 1797" a listing is "1 small [wall stove]."
95. Augusta County CCP, deposition notice delivered by William Patton, the son of Richard Patton, 30 May 1804.
96. Berks County *Tax Records*, op. cit., list Richard Patton as a "single free man" in 1780. Also, the *Redwell Account Book*, MRF lists the sale of small six-plate stoves, but no such entries occur before 1797.
97. Augusta County CCP, Commissioners' Report, 22 July 1804. Also, the *Pine Forge Account Book*, MRF debits "Derick Pennybacker for hauling 11 loads of ore at 6/ . . . £3:6:0" on 15 February 1800.
98. Thompson, *Iron Industry of Western Maryland*, pp. 94-96, 106. Thompson states that "The old hollow ware furnace [at the Catoctin Works] was abandoned in [1867], leaving Isabella as the only producing furnace" (p. 106). Near the end of Blackford's lease, in 1811, Thomas and Willoughby Mayberry of Philadelphia purchased Catoctin (p. 66), and they later sold the works to Brien and McPherson.
99. Wayland, *A History of Shenandoah County*, p. 241.
100. In the MESDA collection are numerous pieces of southern cast iron, including both stove plates and firebacks from the Shenandoah Valley.
101. Klaus Wust, *The Virginia Germans* (Charlottesville, Va.: The University Press of Virginia, 1969), p. 181.
102. Information regarding the Bear family has been derived from papers and account books owned by the family, and also includes oral history recorded by the author from family members. Research on the Bear family and their work is presently being carried on by the author and the MESDA staff.
103. *Pine Forge Account Book* (Special Collections, University of Virginia Library), 25 April 1801.
104. McDowell is listed as "turner" on the county wharf in the 1801 Warner & Hanna Baltimore directory; he is listed in the 1803 C. W. Stafford directory of the same city as a "wood and ivory turner" at the corner of Bond and Wilk Streets in Fell's Point.
105. Charleston, S.C. *City Gazette and Daily Advertiser*, 5 January 1797.
106. John "M'Dowell" is listed as a "turner" at 44 Sassafras St., Philadelphia, in the James Robinson directory for 1810.
107. Wellford is listed in Philadelphia directories by Robinson, Paxton, Kite, and Dawes in 1810, 1811, 1813, 1814, 1816, 1817, 1818, 1819, and 1820.
108. Lenore Embick Flower, "Iron Furnaces in the Cumberland Valley," *Antiques*, Vol. XLV, No. 5, May, 1944, p. 245.

The author would like to thank the following people for their assistance during research done for this article; without their help, this effort could not have been so rewarding: The entire staff of MESDA; Maj. Robert Rose, Winchester, Va.; Roddy Moore, Ferrum, Va.; I. Randolph Dovel, Luray, Va.; Mr. and Mrs. W. T. Bear, Churchville, Va.; Dr. James V. L. Kiser, Great Falls, Va.; Gary Bauserman, Luray, Va.; Byron B. Wenger, Woodstock, Va.; Dr. Francis Amos, Rocky Mount, Va.; Wallace B. Gusler, Colonial Williamsburg Foundation; Lester Ponn, Luray, Va.; John Byrd, Harrisonburg, Va.; Klaus Wust, Edinburg, Va.; Leon Spielman, Sharpsburg, Md.; J. Carson Adkerson, Woodstock, Va.; the staff of the University of Virginia Library; Kate Schultz, Winchester, Va. for her artwork, and especially Dee Ratcliffe, Front Royal, Va. for her unselfish hours of typing.

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